

7. Policy over- and underreaction: from unintentional error to deliberate policy response¹

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INTRODUCTION

In mid-June 2018, amid a severe refugee crisis, President Donald Trump suggested that he was using his administration's separation of children from their parents at the US border as a deterrent against other potential immigrants and as a negotiating tool in efforts to force Democrats to cave on his immigration demands. Do we have at our disposal theories or approaches that can explain such an intentional "zero tolerance" border enforcement policy? And, more generally, do we possess theories or approaches that can explain policies which are deliberately blind (or highly sensitive) to the heterogeneity of the target populations? My view on understanding the aforementioned policy reality is derived from the idea that, at times, political executives implement deliberate policy over- or underreaction because of the damage it inflicts on political rivals and/or its success in shaping voters' perceptions favorably.

This chapter takes stock of recent studies that present a revolutionary idea: that under certain circumstances, disproportionate policy response may be intentionally designed, implemented as planned, and at times, successful in achieving policy and political goals (Maor, 2017a; 2017b; 2018; 2019a; 2019b; 2019c; Maor et al., 2017). Policy over- and underreaction (Maor, 2012; 2014a) are both concepts anchored within the umbrella term of *disproportionate policy response*, which is typically understood to be "a lack of 'fit' or balance between the costs of a public policy and the benefits that are derived from this policy, and/or between a policy's ends and means" (Maor, 2017a, p. 384). This term should not be confused with disproportionate policy outcomes which are policy results that are not equally distributed. A policy

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may therefore be disproportionate in cost–benefits terms although its outcomes may be equally distributed amongst different segments of society. Numerous examples of policy over- and underreactions have been presented elsewhere (Maor, 2012; 2014a; 2017a; 2017b; 2017c; 2019c; forthcoming; Maor et al., 2017; Peters et al., 2017; Howlett and Kemmerling, 2017).

In this chapter, the rationale for deliberate disproportionate policy is presented. The theoretical value of the concept, what it adds to existing policy theories and what it adds to our understanding of policy processes is explored. The argument advanced is that this conceptual turn forces policy scholars and policymakers to ignore the negative connotations associated with these concepts and to recognize instead the repertoire of disproportionate policy response and, at times, its success in achieving policy and/or political goals. This implies that maybe we need to go back to the drawing board and start to challenge some of the assumptions that we have been holding for the last few decades. Perhaps we need to start thinking deeply of other ideas in connection to other areas of science – most importantly in this regard, the emotional context of policy (e.g., Jones et al., 2014; Maor, 2014a; 2014b; 2016), the emotional quality of policy ideas (Cox and Béland, 2013), and the role of emotional entrepreneurs (Maor and Gross, 2015; Maor, 2017d) – that feed into the kind of questions we are asking here. Maybe we need to re-evaluate the emotional dimension of policy success (McConnell, 2010) – for example, in terms of attempts by government to reduce strong emotions which are derived from certain public policies and to neutralize panic and public fears during crises – as well as the emotional factors that feed into perceptions of successful policy performance.

The chapter is structured as follows. The first section presents the definitional ground; the second elaborates on psychological, institutional, and strategic explanations of the causes of policy over- and underreaction. The third section discusses how is deliberate disproportionate policy implemented in times of crisis, and the fourth, elaborates on methodological considerations. The final section concludes with directions for future research.

WHAT IS POLICY OVER- AND UNDERREACTION?

Disproportionate policy response is comprised of two core concepts: policy overreaction and policy underreaction (Maor, 2017b). *Policy overreaction* is a policy that “impose[s] objective and/or perceived social costs without producing offsetting objective and/or perceived benefits” (Maor, 2012, p. 235). *Policy underreaction* refers to “systematically slow and/or insufficient response by policymakers to increased risk or opportunity, or no response at all” (Maor, 2014a, p. 426). This implies that it is “a policy whose actual net utility [...] is smaller than a counterfactual net utility” (Maor, 2014a, p. 428). Because policy problems and solutions are often loaded with ideational and symbolic elements

(e.g. Conlan et al., 2014; Schneider et al., 2014), different individuals and groups may perceive disproportionate policy response somewhat differently, and perceptions at one point may differ later as the magnitude of a crisis or policy problem becomes more apparent. Both concepts are therefore objective facts and, at the same time, matters of interpretation. One manifestation of policy overreaction relevant here is the concept of *policy overinvestment*, which occurs when government invests in a single policy instrument beyond its instrumental value in achieving a policy goal. A manifestation of policy underreaction relevant here is *policy underinvestment*, which occurs when a government invests in a single policy instrument below its instrumental value in achieving a policy goal (adapted from Jones et al., 2014, p. 149).

WHY DOES DISPROPORTIONATE POLICY RESPONSE OCCUR?

Although research examining disproportionate policy response is still in the preliminary stages, it is clearly developing along three paths: psychological, institutional, and strategic explanations.

Psychological Explanations

The first stream of research largely comprises psychological explanations which identify a pattern of over- and underreaction thinking that systematically deviates from perfect rationality (Simon, 1982). This research mainly centers upon how systematic cognitive biases in human decision-making (Kahneman, 2011; Kahneman et al., 1982) inform anomalies in the behavior of individuals and collectivities. Biases that were found to generate overreaction include, among others, the *availability bias* (Lichtenstein et al., 1978), the *affective bias* (Slovic et al., 2007; Viscusi and Gayer, 2015), the *representativeness heuristic* (Kahneman and Tversky, 1973), *probability neglect* (Sunstein, 2002), *action bias* (Patt and Zeckhauser, 2000), *overconfidence bias* (e.g., Lichtenstein et al., 1982), and *overconfidence as a social signalling bias*, that is as a means of gaining an advantage by appearing more competent than others (e.g., Bénabou and Tirole, 2002).

A sub-stream within the psychological stream is dominated by the punctuated equilibrium theory of public policy (Baumgartner and Jones, 1993; Baumgartner et al., 2009; Jones and Baumgartner, 2005), which seeks to explain the observation of large-scale policy-shifts that upset the status quo by concentrating on disproportionate information processing (Jones and Baumgartner, 2005; Baumgartner et al., 2009). Other punctuated equilibrium theories center upon “focusing” or “trigger” events (Birkland, 1997; Cobb and Elder, 1983) or “Pavlovian” policy responses (Lodge and Hood, 2002)

in answer to societal demands for government action. Such demands may be misguided in contexts of public anxieties, fears and panic, including those of a moral nature (Jennings et al., 2020). Competing explanations in international relations attribute overreactions to policymakers' cognitive and emotional biases (e.g., Janis, 1989; Jervis, 1976; Meyer, 2016; Walker and Malici, 2011) or to socio-psychological dynamics in small decision-making groups (Janis, 1982; Mintz and Wayne, 2016; 't Hart et al., 1997). Furthermore, conceptual studies advance construct clarity by exploring the multi-dimensionality of policy over- and underreaction, suggesting that each of the two phenomena possesses its own unique politics and should therefore be studied in its own right (Maor, 2012; 2014a).

Regarding policy underreaction, psychological explanations are based on studies demonstrating that individuals underestimate the cumulative effect of events (Bar-Hillel, 1973; Cohen et al., 1972) and, in the face of potential gains, are risk averse (Kahneman and Tversky, 1979). Research addressing problems in the decision-making process also indicates that individuals manifest complacency, defensive avoidance (Janis and Mann, 1977), "work avoidance" (Heifetz, 1994), and "immunity to change" (Kegan and Lahey, 2009) when under stress caused by unpleasant policy problems, and encounter "cognitive blind spots" (Bazerman and Tenbrunsel, 2012) when confronting complex information.

Institutional Explanations

The second stream, which is in its infancy and so far remains conceptual in nature, revolves around the independent effect of institutions. Peters et al. (2017) jumpstarted this research stream by highlighting how the development of new institutionalism in political science affects the disproportionate policy subfield. Regarding policy overreaction, this phenomenon may occur when the actions of institutions and organizations, or the demands for certain types of action, diverge from the institution's stated norms (Brunsson and Olsen, 1993), and when threats to the institution's core values increase (Peters et al., 2017). Rational choice institutionalism brings to the fore factors that mitigate the effects of veto players. One example includes the opportunities for overreaction created by a divergence of views amongst collective actors (e.g., political parties) regarding how to address a given political or policy problem. Other determining factors include institutional rules and regulations regarding decision strategies (Allison and Zelikow, 1999; March and Olson, 1989); issue complexity and lack of institutional capacity (Epp and Baumgartner, 2017); and flawed government decision-making processes (Allison and Zelikow, 1999).

Regarding policy underreaction, from the normative perspective of new institutionalism, underreaction may occur when the actions of institutions and organizations, or demands for certain types of action, diverge from the institution's declared norms (Brunsson and Olsen, 1993), or when threats to the institution's core values decline (Peters et al., 2017). Rational choice institutionalism – especially the veto player theory (Tsebelis, 2002) – predicts status quo and a likelihood of policy underreaction when veto players are cohesive. Historical institutionalism highlights factors driving path dependency processes (Pierson, 2000). Policy underreaction may result, therefore, from bad structures and ideas (e.g., regulatory ideologies) that are sustained by long-term processes relating to institutions' values, myths and routines. Other determining factors include “institutional blind spots” (e.g., Zegart, 2007), institutional paralysis (Turner, 1978; Weick, 2009), and institutional rules and regulations regarding decision-making strategies (Allison and Zelikow, 1999; March and Olson, 1989).

Strategic Explanations

The third stream, likewise in its infancy and conceptual in nature, advances the idea that, under certain conditions, policymakers may face incentives to design and implement disproportionate policy which, at times, may be successful in achieving a policy goal (Maor, 2017a). The fundamental strategies set forth in the *disproportionate policy perspective* include policymakers' prioritizing policy effectiveness over policy costs (or over other factors), leading to the formulation and implementation of policy overreaction options, and/or cost-consciousness (or other factors) over effectiveness, which results in the formulation and implementation of policy underreaction options. An example of the former is attaining a policy goal “at any costs” by opting for a highly detailed and complicated policy design that leaves little room for error. An example of the latter is saving design costs by opting for a policy design that is based on cost-free (read, relatively low-quality) data, or imposing the constraint that the policy must not exert an adverse (economic) impact on other policy sectors. The perspective also posits that policy overreaction will be pronounced if the emotional context of the policy (e.g., mass panic and public fears) is equally, if not more, important than the substantive nature of the problem at hand, and that disproportionate policy options may be planned as signalling devices or context-setters (e.g., resolving issues concerning the fragmentation of decision-making). The disproportionate policy perspective implies that “*a disproportionate response in the policy domain may at times be a politically well-calibrated and highly effective strategy because of the damage it inflicts on political rivals and/or its success in shaping voters' perceptions favorably*” (Maor, 2019c, p. 5, italics in original). In addition, this per-

spective 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 disproportionate policy options and actions which is applicable during crisis and non-crisis periods. It directs attention to the policy dynamics at play when policy- over- and underreaction options are designed and implemented; to their consequences for policymakers, target audiences and the general public in the short and long terms; to their consequences for democracy; and to the politics of policy calibration.

Strategic explanations of policy over- and underreaction 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, p. 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 (Simon, 1985; 1995). Because individuals differ in their motivations and opportunities to process information carefully, and because contexts differ in their complexity, individuals need not be consistent decision-makers (Lodge and Taber, 2000), as rational choice theory assumes (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. Some individuals operating within particular contexts can, therefore, overcome (the “efficient goal attainment”) bias (Lau et al., 2008) and make “rational” – read “reasonable” or “good enough” – disproportionate policy decisions.

Political executives may be motivated to overreact in order, for example, to pander to the policy positions of voters, even misguided ones (e.g., Canes-Wrone et al., 2001; Canes-Wrone and Shotts, 2007; Maskin and Tirole, 2004). These models of electoral pandering focus on political executives who are better informed than voters yet *knowingly* choose policies that are not in the electorate’s best interests. Political executives’ pandering may target their political base, powerful and well-regarded groups (e.g., senior citizens), economic elites and organized groups representing business interests, or public opinion at large. According to game theoretic models, politicians are motivated to react disproportionately when electoral accountability considerations prevail, resulting in their desire to give voters the impression that they are well-informed. This is often exacerbated by ideological polarization between candidates (Bils, 2018).

Political executives may also be motivated to overreact in order to project an image of competency – thereby acquiring a short-term “issue lease” (Petrocik, 1996, p. 827) or, preferably, long-term issue ownership (Budge and Farlie, 1983; Bellucci, 2006). The “directional model” of voter choice and mixed

models of spatial voting also provide inspirations for policy overreaction. Because voters are inclined to vote for parties and candidates which share their perspective on an issue and those which assume the most extreme positions (Rabinowitz and Macdonald, 1989), policy overreaction is one possible means by which parties and candidates can signal extremity. Mixed models of voter choice provide another inspiration for overreaction. Because intra-party dynamics or systemic constraints at work in multiparty systems limit parties' ability to carry out proposals in full, voters favour extreme parties, hoping that this will provide the extent of policy change they seek, for example, by pulling a coalition government in the preferred direction (Merrill and Grofman, 1999; Iversen, 1994; Kedar, 2005). Political parties and candidates can indicate extremity to voters using policy overreaction.

Political executives may also be motivated to overreact in order to restore confidence in 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 historical 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; 2017b). 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 policymakers' intentions, thereby strengthening coercive diplomacy and avoiding unnecessary wars (Jervis, 2017).

Regarding deliberate policy underreaction, when political executives fear punishment at the hands of voters they try to minimize electoral risks by avoiding blame (Weaver, 1986; Hood, 2011; Hinterleitner and Sager, 2016; Hinterleitner, 2017), thus shying away from drifting too far from public opinion. They may also try to minimize electoral risks by refraining from implementing the solution to a policy problem if this will incur significant costs in the present but offer benefits only later, or if fixing a problem will incur costs at present, even though this will avoid a future cost that is uncertain but likely to be much higher (Bazerman and Watkins, 2008). In addition, they may deliberately underreact for a number of reasons: to buy time during which they can amass more information on a policy problem before formulating a response; in the hopes that the problem will disappear in the meantime; to prevent inflaming an already highly contentious issue; to pass the problem to the next administration; to avoid becoming embroiled in a major dispute; to try to marginalize an item on the political agenda (McConnell and 't Hart, 2014); or to avoid hard trade-offs with other policy objectives (Maor, 2014a). Contextual factors that may intensify concerns of blame avoidance – and therefore policy underreaction – include lack of credible scapegoats towards

whom blame could be directed or with whom it could be shared (e.g., foreign enemies or competitors, coalition partners, a second chamber, and other levels of government); prevailing ideologies which advance small-government narratives; coalitions' "blocking" actions (e.g., when policy actors "dig in" along partisan lines); and a lack of viable solutions (McConnell and 't Hart, 2014).

HOW IS DELIBERATE DISPROPORTIONATE POLICY IMPLEMENTED IN TIMES OF CRISIS?

Although we have elegant theories of the policy process at our disposal, we may not fully understand some of them. To advance our knowledge, we may need to delve deeper into these theories, while keeping in mind that the possibility exists that these elegant theories may break down, for example, when trying to explain the next layer of reality underneath the wild and strong policy punctuations. In cases of severe crises, for example, Jones and Baumgartner's (2005, p. 147) idea, that "[p]olitical institutions impose costs on policy action in direct proportion to how far a policy proposal has proceeded in the law making process", may be less applicable when policymakers' immediate response does not go through a legislative process. And even if it does, in times of extended periods of high threat and high uncertainty, the balance between order and other values (such as freedom) shifts to a considerable degree in favour of order – that is, the government's ability to deal with the threats to national well-being (Gross, 2011) and to "bring things back to normal" (Boin and 't Hart, 2003, p. 3). Consequently, a legislative process may bear relatively little cost on policy action due to swift legislative moves supported by both government and opposition. Let us briefly explore how deliberate disproportionate policy is implemented during crises.

Two policy overreaction options may be employed across complex policy systems at times of crisis (Boin et al., 2005), especially during suspected tipping points: governments often implement *non-selective overreaction* in the wake of natural disasters or other catastrophes, by means of which they extend help to all individuals and institutions in need of assistance, including also free-riders, without any eligibility assessments following the crisis. By contrast, governments can exercise their power selectively, using *selective overreaction*, such as stress tests for banks. This pinpoints the individuals or institutions most in need of help, as well as borderline cases. *Non-selective overreaction* ignores differences among the target audience, while *selective overreaction* frequently entails a significant safety margin, in order to ensure that all in need, among them also borderline cases and perceived borderline cases, receive the help they require. Governments tend to withhold information about the threshold for receiving help in order to maintain the public credibility of selective mechanisms (Maor, 2019c, p. 4).

In addition, key choices in the repertoire of deliberate policy overreaction for such purposes are rhetoric and doctrine. *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, or by any means necessary” (Maor, 2019c, p. 4). An example of policy overreaction doctrine is the Cold War era’s MAD (Mutually Assured Destruction) – an all-or-nothing extreme of mutual destruction – that kept the two sides from taking the conflict to the nuclear level. *Policy overreaction rhetoric*, a sub-set 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, or by any means necessary” (Maor, 2019c, p. 4). An example of policy overreaction rhetoric is Boris Johnson’s “do or die” (or “come what may”) pledge to lead Britain out of the EU on 31 October 2019, which was delivered on the eve of his victory in the race to lead the Conservative Party.

An analysis of policy systems in the midst of panic and public fear indicates that governments may need to employ overwhelming power in order to calm fears and minimize uncertainties. This usually entails the plausible allocation of significant public resources to be used with discretion throughout the period of the crisis (Gorton, 2015). By so doing, the government can convince the public that it can succeed in resolving the problem singlehandedly. For example, during the 2007–2008 financial crisis the US Federal Reserve followed Bagehot’s (1873) rule: during times of crisis, the central bank should lend freely (that is, without limit), at a high rate, and on good collateral (Bernanke, 2014a; 2014b; Draghi, 2013; King, 2010). This particular instance of overreaction resulted partially from uncertainty regarding when the crisis began, the meaning of “good collateral” and a “high rate” (Gorton, 2012, p. 196), and the government’s pressing desire to convince the public that its support could solve the crisis singlehandedly. This was accomplished by the allocation of \$700 billion by the US Congress in the framework of the Troubled Asset Relief Program, a step which calmed the banking panic. Following this, the amount was reduced to \$475 billion by the Dodd–Frank Wall Street Reform and Consumer Protection Act.

Policy underreaction can occur when policymakers correctly assess a risk but regard the policy as mainly dependent on external constraints, such as the response of other dominant system players (Maor, 2014a). For example, even though the Israelis were aware six hours prior to the outbreak of the 1973 Yom Kippur War that hostilities were looming, the Israeli government decided not to embark on a pre-emptive attack (Bar-Joseph, 2005) but rather called up the reserve forces. This choice was motivated by Israeli concerns that following a pre-emptive attack the US would refuse to extend military and diplomatic aid to Israel. Indeed, this assessment was correct, as Henry Kissinger, then US

Secretary of State, later confirmed: had Israel launched a pre-emptive attack, he stated, the country would not have received “so much as a nail” (Meir, 1975).

Deliberate policy underreaction also encompasses aspects of rhetoric and doctrine. *Policy underreaction doctrine* is “a coherent set of policy principles which presents a conditional commitment for achieving a policy goal based primarily on policy costs considerations” (Maor, 2018, p. 52). An example of this is the use of the “no regrets” doctrine within a situation of increased risk (e.g., a slow-moving crisis). According to this doctrine, any measures employed in order to respond to uncertainty must also achieve other goals. This is evident with regard to the UK policy on climate change, as the UK Department for Environment, Food, and Rural Affairs (2005, p. 8) notes: “Most current adaptations are justified on co-benefits and/or are ‘no regret’ options.” While the government presents such activities as proportionate (UK Department for Environment, Food, and Rural Affairs, 2005, p. 8), they are not intended to achieve optimal performance under all climate change scenarios, as is clear, for example, regarding flood preparedness: “[u]nder-investment in these defenses is storing up costs and risks for the future” (Committee on Climate Change, 2014, p. 8).²

Policy underreaction rhetoric, “a subset of policy underreaction doctrine, refers to arguments employed by policymakers to reach and persuade the target populations of the former’s conditional commitment to respond to a policy problem based primarily on policy costs considerations” (Maor, 2018, p. 53). One example of increased risk is apparent in a statement made jointly by Rose Kelly, the Australian Minister for Arts, Sport, the Environment, Tourism, and Territories, and her colleague John Kerin, the Minister for Primary Industries and Energy (Kelly and Kerin, 1990), according to which, “[w]hile recognizing the need to restrict emissions and to aim for a 20% reduction, the Government will not proceed with measures which have net adverse economic impacts nationally or on Australia’s trade competitiveness in the absence of similar action by major greenhouse gas producing countries.”³ Thus such policy instruments are not designed to attain policy effectiveness. Rather, they should not have any detrimental effects, whether intentional or unintentional, on other policy sectors.

From the researcher’s perspective, identifying these cases is certainly no easy task. Indeed, political executives may tend to hide, or at least downplay, the fact that they intend to over- or underreact before policy is executed. To

² The example is drawn from Maor (2018).

³ The example is drawn from Maor (2018).

ensure that we do not identify and measure the wrong things, attention now turns to measurement issues.

MEASUREMENT

Considering that policy over- and underreaction are both objective facts and a matter of interpretation, two methods can be employed to identify them: one relies on subjective evaluations, while the other employs objective assessments. Subjective evaluation uses surveys and interviews to gauge perceptions regarding the extent to which a policy response is (dis)proportionate. Likewise, overreaction may be evidenced by a target audience's shock at the implementation of a sudden and unexpected policy (Carpenter, 2010, p. 582). Scholars can assess data in which such surprises are encoded, for example fluctuations in stock prices (in the case of an economic policy with financial ramifications for certain firms).

By contrast, objective evaluations can utilize: (1) cost–benefit analysis; (2) information concerning policy-domain expertise collated prior to the policy implementation; and (3) broad-based consensus among relevant audiences. Cost–benefit analysis (the first method) should preferably cover two decades or more, enabling an outcome that assesses the (dis)proportionality of the policy in light of the definitions of policy over- and underreaction delineated above. Policy is not assessed in a vacuum but rather with regard to an information set made up of cost–benefit analyses, situation evaluations, and risk assessments. Thus, in the case of the second method, the availability of such information in real-time can facilitate the identification of deliberate disproportionate policy *prior* to the policy's implementation and in relation to *possible* outcomes. With regard to the third method, a policy should be regarded as disproportionate when a broad consensus regarding this exists both in the relevant policy sector and among a wide range of observers and/or experts.

Disproportionality can also be assessed using historical, legal and comparative benchmarks. Scholars may examine the historical performance of a policy (read, the intensity of the policy instrument over time) in relation to the acuteness of the policy problem. Scholars can also employ the legal doctrine of proportionality (e.g., Lodge and Hood, 2002, p. 7), or choose to conduct a comparative test. In the latter case, they can measure disproportionality according to the distance between a given government's policy responses and the average response of the governments under investigation, while factoring in variations in the gravity of the policy problem on the domestic level (e.g., De Francesco and Maggetti, 2018).

If we want to explain why political executives behave in a particular way, we must understand the thinking behind their actions. Therefore, elite interviews (involving open questions) – through which we can uncover the political

executives' meanings, beliefs and preferences, and discover how they think about their actions – should be employed, together with the content analysis of speeches, press releases, inquiries, hearings and other documents. Considering that we lack a “logic” or “model” of explanation, we must note the context within which policymakers act. Such analysis must therefore closely evaluate four elements: (1) policy details and the behavior of implementing agencies; (2) context and circumstances; (3) target audience (e.g., capacities, ethics, etc.); and (4) policy results.

FUTURE RESEARCH

It is remarkable that most of the work in policy sciences makes no reference to disproportionate policy response. Indeed, at the present time, this phenomenon is considered by many as a policy mistake which is therefore not worth academic attention. My view is completely different. The study of disproportionate policy is highly important because, under certain conditions, it creates substantial value for policymakers. In addition, it offers unique insight into modern political reality. Global and domestic threats coupled with publics that are relatively sceptical 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 US response to 9/11. It is, therefore, an exciting time for research on overreaction in politics and policy.

Much work remains to be done regarding definitional foundations. More dimensions should be identified, tested, refined and clarified in order to enhance measurement precision (e.g., Maor, forthcoming). Research may also consider how inter-agency interaction or bureaucratic units within government departments influence and are influenced by deliberate disproportionate policy. Future research that develops and employs multilevel theorizing and analytical techniques can enhance our understanding of the rich interplay between policymakers and bureaucratic agencies involved in the formulation and calibration of disproportionate policy response across levels of analysis. Future research should also pay attention to the role of time in designing such policy response (Howlett and Goetz, 2014), considering how and why policymakers tend to formulate a disproportionate policy response in particular time periods; how and why incentives and motivations for formulating such policy response change and evolve over time; how the changes in the institutional forces of presidential and prime ministerial power (e.g., as leaders of their

parties) and in the personalization of politics affect their motivation to formulate such policy responses; and how different macro-social factors influence the formulation of such policies and their effects in different historical periods. Future research should also pay attention to scope conditions and thresholds for people's misperceptions of policy overreaction as policy underreaction or a proportionate response and vice versa. Finally, scholars should delve into processes through which deliberate disproportionate policy responses are built, maintained and calibrated. More work is required to understand fully how to manage such types of policy response effectively, primarily through qualitative research which offers the benefits of thick descriptions and inductive theorizing. The aforementioned avenues offer a broad agenda for research on disproportionate policy response. In my opinion, these are the most useful ways to proceed.

REFERENCES

- Allison, G. and Zelikow, P. (1999). *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston, MA: Little, Brown and Company.
- Bagehot, W. (1873). *Lombard Street: A Description of the Money Market*. London: Henry S. King.
- Bar-Hillel, M. (1973). On the Subjective Probability of Compound Events. *Organizational Behavior and Human Performance*, **9**, 396–406.
- Bar-Joseph, U. (2005). *Watchman Fell Asleep: The Surprise of Yom Kippur and its Sources*. New York, NY: State University of New York Press.
- Baumgartner, F.R. and Jones, B.D. (1993). *Agendas and Instabilities in American Politics*. Chicago, IL: University of Chicago Press.
- Baumgartner, F.R., Breunig, C., Green-Pedersen, C., Jones, B.D., Mortensen, P.B., Nuytemans, M. and Walgrave, S. (2009). Punctuated Equilibrium in Comparative Perspective. *American Journal of Political Science*, **53**(3), 603–20.
- Bazerman, M.H. and Tenbrunsel, A.E. (2012). *Blind Spots*. Princeton, NJ: Princeton University Press.
- Bazerman, M.H. and Watkins, M.D. (2008). *Predictable Surprises: The Disasters You Should Have Seen Coming, and How to Prevent Them*. Boston, MA: Harvard Business Press.
- Bellucci, P. (2006). Tracing the Cognitive and Affective Roots of “Party Competence”. *Electoral Studies*, **25**, 548–69.
- Bénabou, R. and Tirole, J. (2002). Self-Confidence and Personal Motivation. *Quarterly Journal of Economics*, **117**, 871–915.
- Bernanke, B. (2014a). 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. Brookings Institution (January).
- Bernanke, B. (2014b). The Federal Reserve: Looking Back, Looking Forward. Available at <http://www.federalreserve.gov/newsevents/speech/bernanke20140103a.htm>.
- Bils, P. (2018). *Essays on Policymaking and Expertise*. Unpublished PhD Dissertation. Department of Political Science, University of Rochester.
- Birkland, T.A. (1997). *After Disaster*. Washington, DC: Georgetown University Press.

- Boin, Arjen and 't Hart, Paul (2003). Public Leadership in Times of Crisis: Mission Impossible? *Public Administration Review*, **63**, 544–53.
- Boin, A., 't Hart, P., Stern, E. and Sundelius, B. (2005). *The Politics of Crisis Management: Public Leadership under Pressure*. Cambridge, MA: Cambridge University Press.
- Brunsson, N. and Olsen, J.P. (1993). *The Reforming Organization*. London: Routledge.
- Budge, I. and Farlie, D.J. (1983). *Explaining and Predicting Elections*. London: Allen and Unwin.
- Canes-Wrone, B. and Shotts, K.W. (2007). When Do Elections Encourage Ideological Rigidity? *American Political Science Review*, **101**, 273–88.
- Canes-Wrone, B., Herron, M.C. and Shotts, K.W. (2001). Leadership and Pandering: A Theory of Executive Policymaking. *American Journal of Political Science*, **45**, 532–50.
- Carpenter, D. (2010). *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA*. Princeton, NJ: Princeton University Press.
- Chong, D. (2013). Degrees of Rationality in Politics. In L. Huddy, D.O. Sears and J.S. Levy (eds), *The Oxford Handbook of Political Psychology* (pp. 96–129). 2nd edn. Oxford: Oxford University Press.
- Cobb, R.W. and Elder, C.D. (1983). *Participation in American Politics*. Baltimore, MD: John Hopkins University Press.
- Cohen, J., Chesnick, E.I. and Haran, D.A. (1972). A Confirmation of the Inertial-Y Effect in Sequential Choice and Decision. *British Journal of Psychology*, **63**, 41–6.
- Committee on Climate Change (2014). *Progress Report 2014*. London: Committee on Climate Change.
- Conlan, T.J., Posner, P.L. and Beam, D.R. (2014). *Pathways of Power: The Dynamics of National Policymaking*. Washington, DC: Georgetown University Press.
- Cox, R.H. and Béland, D. (2013). Valence, Policy Ideas, and the Rise of Sustainability. *Governance*, **26**(2), 307–28.
- De Francesco, F. and Maggetti, M. (2018). Assessing Disproportionality: Indexes of Policy Responses to the 2007–2008 Banking Crisis. *Policy Sciences*, **51**(1), 17–38.
- Draghi, M. (2013). Building Stability and Sustained Prosperity in Europe. Speech at the event entitled “The Future of Europe in the Global Economy.” Hosted by the City of London, 23 May.
- Epp, D.A. and Baumgartner, F.R. (2017). Complexity, Capacity, and Budget Punctuations. *Policy Studies Journal*, **45**(2), 247–64.
- Gorton, G. (2012). *Misunderstanding Financial Crises*. Oxford: Oxford University Press.
- Gorton, G. (2015). Stress for Success: A Review of Timothy Geithner’s Financial Crisis Memoir. *Journal of Economic Literature*, **53**(4), 975–95.
- Gross, O. (2011). Chaos and Rules: Should Responses to Violent Crises Always be Constitutional? *Yale Law Journal*, **112**, 1011–36.
- Heifetz, R.A. (1994). *Leadership Without Easy Answers*. Cambridge, MA: Harvard University Press.
- Hinterleitner, M. (2017). Policy Failures, Blame Games and Changes to Policy Practice. *Journal of Public Policy*, **38**, 221–42.
- Hinterleitner, M. and Sager, F. (2016). Anticipatory and Reactive Forms of Blame Avoidance: Of Foxes and Lions. *European Political Science Review*, **9**, 587–606.
- Hood, C. (2011). *The Blame Game: Spin, Bureaucracy, and Self-Preservation in Government*. Princeton, NJ: Princeton University Press.

- Howlett, M. and Goetz, K.H. (2014). Introduction: Time, Temporality and Timescapes in Administration and Policy. *International Review of Administrative Sciences*, **80**(3), 477–92.
- Howlett, M. and Kemmerling, A. (2017). Calibrating Climate Change Policies: The Causes and Consequences of Sustained Underreaction. *Journal of Environmental Policy & Planning*, **19**(6), 625–37.
- Iversen, T. (1994). Political Leadership and Representation in West European Democracies: A Test of Three Models of Voting. *American Journal of Political Science*, **38**, 45–74.
- Janis, I.L. (1982). *Victims of Groupthink: A Psychological Study of Foreign-Policy Decisions and Fiascos*. 2nd edn. Boston, MA: Houghton Mifflin. First published in 1972.
- Janis, I.L. (1989). *Crucial Decisions. Leadership in Policymaking and Crisis Management*. New York: The Free Press.
- Janis, I.L. and Mann, L. (1977). *Decision Making*. New York: Free Press.
- Jennings, W., Farrall, S., Gray, E. and Hay, C. (2020). Moral Panics and Punctuated Equilibrium in Public Policy: An Analysis of the Criminal Justice Policy Agenda in Britain. *Policy Studies Journal*, **48**(1), 207–34.
- 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, NJ: Princeton University Press.
- Jones, B.D. and Baumgartner, F.R. (2005). *The Politics of Attention: How Government Prioritizes Problems*. Chicago, IL: University of Chicago Press.
- Jones, B.D., Thomas, H.F. and Wolfe, M. (2014). Policy Bubbles. *Policy Studies Journal*, **42**(1), 146–71.
- Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Straus, and Giroux.
- Kahneman, D. and Tversky, A. (1973). On the Psychology of Prediction. *Psychological Review*, **80**, 237–51.
- Kahneman, D. and Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, **47**, 263–92.
- Kahneman, D., Slovic, P. and Tversky, A. (eds) (1982). *Judgment under Uncertainty: Heuristics and Biases*. New York: Cambridge University Press.
- Kedar, O. (2005). When Moderate Voters Prefer Extreme Policies: Policy Balancing in Parliamentary Elections. *American Political Science Review*, **99**, 185–99.
- Kegan, R.L. and Lahey, L. (2009). *Immunity to Change*. Cambridge, MA: Harvard University Press.
- Kelly, R. and Kerin, J. (1990). Joint Statement: Government sets targets for reduction in greenhouse gases, 11 October, available at http://parlinfo.aph.gov.au/parlInfo/download/media/pressrel/2209922/upload_binary/2209922.pdf;fileType=application%2Fpdf#search=%22media/pressrel/2209922%22.
- King, M. (2010). Banking – from Bagehot to Basel, and Back Again. Speech at the Second Bagehot Lecture, Buttonwood Gathering, New York, 25 October. <http://www.bis.org/review/r101028a.pdf?frames=0>.
- Lau, R.R., Anderson, D.J. and Redlawsk, D.P. (2008). An Exploration of Correct Voting in Recent U.S. Presidential Elections. *American Journal of Political Science*, **52**, 395–411.
- Lichtenstein, S., Fischhoff, B. and 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. 306–33). Cambridge: Cambridge University Press.
- Lichtenstein, S., Slovic, P., Fischhoff, B., Layman, M. and Combs, B. (1978). Judged frequency of lethal events. *Journal of Experimental Psychology: Human Learning and Memory*, **4**, 551–78.
- Lodge, M. and Hood, C. (2002). Pavlovian Policy Responses to Media Feeding Frenzies? Dangerous Dogs Regulation in Comparative Perspective. *Journal of Contingencies and Crisis Management*, **10**, 1–13.
- Lodge, M. and Taber, C. (2000). Three Steps toward a Theory of Motivated Political Reasoning. In A. Lupia, M. McCubbins and S. Popkin (eds), *Elements of Reason: Cognition, Choice, and the Bounds of Rationality* (pp. 182–213). New York: Cambridge University Press.
- Maor, M. (2012). Policy Overreaction. *Journal of Public Policy*, **32**(3), 231–59.
- Maor, M. (2014a). Policy Persistence, Risk Estimation and Policy Underreaction. *Policy Sciences*, **47**(4), 425–43.
- Maor, M. (2014b). Policy Bubbles: Policy Overreaction and Positive Feedback. *Governance*, **27**(3), 469–87.
- 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), 383–98.
- Maor, M. (2017b). Disproportionate Policy Response. In *Politics: Oxford Research Encyclopedias*, Oxford University Press.
- Maor, M. (2017c). Policy Overreaction Doctrine: From Ideal-Type to Context-Sensitive Solution in Times of Crisis. In M. Howlett and I. Mukherjee (eds), *Handbook of Policy Formulation* (pp. 539–53). Cheltenham, UK and Northampton, MA, USA: 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), 1401–17.
- Maor, M. (2018). Rhetoric and Doctrines of Policy Over- and Underreactions in Times of Crisis. *Policy & Politics*, **46**(1), 47–63.
- Maor, M. (2019a). Overreaction and Bubbles in Politics and Policy. In Alex Mintz and Lesley Terris (eds), *Oxford Handbook on Behavioral Political Science*, Oxford Handbooks Online, Oxford University Press.
- Maor, M. (2019b). Strategic Policy Overreaction as a Risky Policy Investment. *International Review of Public Policy*, **1**(1), 46–64.
- Maor, M. (2019c). Deliberate Disproportionate Policy Response: Towards a Conceptual Turn. *Journal of Public Policy*, DOI:10.1017/S0143814X19000278.
- Maor, M. (forthcoming). Policy Over- and Under-reaction as Policy Styles. In M. Howlett and J. Tosun (eds), *The Routledge Handbook of Policy Styles*. London: Routledge.
- Maor, M. and 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, 16–19 April, Chicago.
- Maor, M., Tosun, J. and 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.

- March, J.G. and Olson, J.P. (1989). *Rediscovering Institutions: The Organizational Basis of Politics*. New York: Free Press.
- Maskin, E. and Tirole, J. (2004). The Politician and the Judge: Accountability in Government. *American Economic Review*, **94**, 1034–54.
- McConnell, A. (2010). *Understanding Policy Success: Rethinking Public Policy*. Basingstoke: Palgrave Macmillan.
- McConnell, A. and 't Hart, P. (2014). Public Policy as Inaction: The Politics of Doing Nothing. Available at <https://ssrn.com/abstract=2500010>.
- Meir, G. (1975). *My Life*. New York: G.P. Putnam's Sons.
- Merrill, S. III and Grofman, B. (1999). *A Unified Theory of Voting: Directional and Proximity Spatial Models*. Cambridge: Cambridge University Press.
- Meyer, O.C. (2016). Over- and Underreaction to Transboundary Threats: Two Sides of a Misprinted Coin? *Journal of European Public Policy*, **23**(5), 735–52.
- Mintz, A. and Wayne, C. (2016). *The Ploythink Syndrome: U.S. Foreign Policy Decisions on 9/11, Afghanistan, Iraq, Syria, and ISIS*. Stanford, CA: Stanford University Press.
- Patt, A. and Zeckhauser, R. (2000). Action Bias and Environmental Decisions. *Journal of Risk and Uncertainty*, **21**, 45–72.
- Peters, B.G., Jordan, A. and Tosun, J. (2017). Over-reaction and Under-reaction in Climate Policy: An Institutional Analysis. *Journal of Environmental Policy & Planning*, **19**(6), 612–24.
- Petrocik, J.R. (1996). Issue Ownership in Presidential Elections, with a 1980 Case Study. *American Journal of Political Science*, **40**, 825–50.
- Pierson, P. (2000). Increasing Returns, Path Dependency, and the Study of Politics. *American Political Science Review*, **94**, 251–67.
- Rabinowitz, G. and Macdonald, S.E. (1989). A Directional Theory of Issue Voting. *American Political Science Review*, **83**, 93–121.
- Schneider, A.L., Ingram, H. and de Leon, P. (2014). Democratic Policy Design: Social Construction of Target Populations. In P.A. Sabatier and C.M. Weible (eds), *Theories of the Policy Process* (pp. 105–50). Boulder, CO: Westview Press.
- Simon, H.A. (1982). *Models of Bounded Rationality*, 3 vols. Cambridge, MA: MIT 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., Finucane, M.L., Peters, E. and MacGregor, D.G. (2007). The Affect Heuristic. *European Journal of Operational Research*, **177**, 1333–52.
- Sunstein, C.R. (2002). Probability Neglect: Emotions, Worst Cases and Law. *Yale Law Journal*, **112**, 61–107.
- 't Hart, P., Stern, E. and Sundelius, B. (eds) (1997). *Beyond Groupthink. Political Group Dynamics in Foreign Policy-Making*. Ann Arbor, MI: University of Michigan Press.
- Tsebelis, G. (2002). *Veto Players*. Princeton, NJ: Princeton University Press.
- Turner, B.A. (1978). *Man-Made Disasters*. London: Wykeham.
- U.K. Department for Environment, Food and Rural Affairs (2005). *Adaptation Policy Framework: A Consultation by the Department for Environment, Food and Rural Affairs*. London: Defra.

- Viscusi, W.K. and Gayer, T. (2015). Behavioral Public Choice: The Behavioral Paradox of Government Policy. *Harvard Journal of Law & Public Policy*, **38**, 973–1007.
- Walker, S.G. and Malici, A. (2011). *U.S. Presidents and Foreign Policy Mistakes*. Stanford, CA: Stanford University Press.
- Weaver, K.R. (1986). The Politics of Blame Avoidance. *Journal of Public Policy*, **6**, 371–98.
- Weick, K.E. (2009). *Making Sense of the Organization*. New York: Wiley.
- Zegart, A.B. (2007). *Spying Blind: The CIA, the FBI, and the Origin of 9/11*. Princeton, NJ: Princeton University Press.