Emotion-Driven Negative Policy Bubbles*

Moshe Maor
Department of Political Science
Hebrew University of Jerusalem

April, 2015

Word Count: 11187 (all inclusive)

---

* Earlier versions of this paper – including the first version, entitled "Policy Anti-Bubbles" – were presented at the workshop on "Financial, Technological, Social and Political Bubbles", ETH Risk Center, Zurich, 2015; the Biennial ECPR Standing Group for Regulatory Governance Conference, 2014; the Annual Meeting of the Midwest Political Science Association, 2014; the Institute of Political Science, University of Heidelberg, 2014, and the International Workshop on "Policy Design and Governance Failures", Lee Kuan Yew School of Public Policy, National University of Singapore, 2014. I thank the audiences of these events for useful comments and suggestions. All remaining errors are my own. Correspondence concerning this article should be sent to Moshe Maor, Department of Political Science, Hebrew University of Jerusalem, Mount Scopus 91905, Jerusalem, moshe.maor@mail.huji.ac.il.

Abstract

Existing explanations of systematic undersupply of policy (e.g., institutional frictions, policy drift and loss aversion) highlight the role of institutional and cognitive factors in the policy process while paying little attention to the role of emotions and emotional sentiments. To bridge this gap, this paper conceptualizes the role of negative emotions and emotional sentiments in driving systematic policy underreaction (or what I have termed a *negative policy bubble*). Regarding the birth of emotion-driven negative policy bubbles, the behavioral understanding advanced here points to an endogenous process that affects opinion formation, attention, learning, behavior and attitudes; an exogenous shock that "turns on" an endogenous process; emotional manipulation by emotional entrepreneurs, or a process by which the psychological context within which the policy process takes place conditions policy dynamics. Self-reinforcing processes interact with the contagion of emotions, imitation and herd behavior to reinforce the lack of confidence in the policy, thereby creating a lock-in effect of systematic undersupply of policy. This process may be interrupted following modest endogenous or exogenous perturbations, emotion down-regulation (i.e., decrease) by emotional entrepreneurs, as well as following the reduction in negativity bias when the information environment becomes predominantly negative. The paper also provides guidance on productive directions for future research.

Keywords. Policy change, Underreaction, Underinvestment, Emotions, Emotional entrepreneurs, Mood, Contagion, Herd behavior.

Introduction

At times, a public policy may be undervalued by the political elite and/or the general public because of moral concerns (Haidt 2012), negative emotions, cost-benefit concerns (e.g., wastefulness) as well as other ideational or symbolic concerns (Schneider et al. 2014; Conlan et al. 2014). This is especially the case when the policy at hand is the product of directional goals (Baumgartner et al. 2009a; Burstein 2014) rather than accuracy goals (Kuhn 1977). This, in turn, may lead to policy undersupply or government underinvestment in a policy instrument below its instrumental value in achieving a policy goal (adapted from Jones et al. 2014). Policy undersupply may be sustained by self-reinforcing processes over a relatively long period of time, despite an increase in the severity of the policy problem, which may or may not be apparent. This process is bound to be reversed when the severity of the policy problem reaches a stage that the general public and/or the political elite become aware of it and of the need to immediately address it.

I term the aforementioned process a *negative policy bubble* and define it as a policy underreaction — or underinvestment in a policy instrument below its instrumental value in achieving a policy goal — which is propelled by self-reinforcing processes over an extended period of time.[1] *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). The aforementioned process is the exact opposite of a policy

[1] The term negative bubble is common in finance where it refers to a process characterized by pressures towards panic accompanied by strong herding leading to disproportionate selling (e.g., Sornette and Cauwels 2014).

overreaction (Maor 2012), or overinvestment in a policy instrument above its instrumental value in achieving a policy goal, which is reinforced by positive feedback over an extended period of time – a phenomenon known as a policy bubble (Jones et al. 2014; Maor 2014b).

Conventional explanations for systematic undersupply of policy suggest the following mechanisms: *institutional frictions*, which result from the interaction of decision costs and cognitive costs (Jones and Baumgartner 2005; Baumgartner et al. 2009b); *policy drift*, which results from the failure of policy makers to update policies due to pressure from actors exploiting veto points in the political process (Hacker 2004); *loss aversion*, which results from the tendency of individuals to strongly prefer avoiding losses to acquiring gains (Weaver 1986; Hood 2010); and *trade-offs over time* which result from governmental unwillingness to inflict immediate pain on citizens for gains that will only arrive over the long run (Jacobs 2011). These mechanisms highlight institutional and cognitive factors in policy processes while paying little attention to the role of emotions and emotional sentiments (e.g., policy mood).

Emotions refer to particular feelings (e.g., sadness, anger) that are "intense, short-lived, and usually have a definite cause and a clear cognitive content" (Forgas 1992, p. 230). Emotional sentiments represent temporally stable emotional dispositions towards a person, group, or symbol (Frijda 1986). Emotions affect opinion formation, attention, learning, and political behavior (for recent reviews see Brader et al. 2011; Brader and Marcus 2013), as well as attitudes on a wide range of issues related to world politics, such as nuclear proliferation, the logic of deterrence, the war on terror, motives for war, alliances and defense policies, ethnic conflicts, and humanitarian intervention (e.g., Hutchinson and Bleiker 2014).

Emotions have not been completely missing from policy studies. Bounded rationality, for example, recognizes that decisions are channeled by their cognitive and emotional architecture (Simon 1983), that decision makers are prisoners to their limited attention, and that the key to its allocation is emotion (Jones 1994, 2001; Simon 1983; Jones and Wolfe 2013). In addition, standard studies of the policy process point to the importance of emotions in policy processes (Kingdon 1995; Jones and Baumgartner 2005; Cox and Béland 2013). However, in the last decade or so, we have been witnessing a revolution in decision making and emotions (e.g., Kahneman 2011; Lodge and Taber 2013) which has so far gone largely unnoticed in studies of the policy process. This paper attempts to meaningfully bring the insight that emotions matter in people's assessment of public problems, policy instruments and target populations into a conceptual framework which addresses the role of negative emotions in driving a negative policy bubble.

A salient example from the domain of health policy, which revolves around the response of the U.S. government to the AIDS epidemics, highlights the substantive conceptual bite proposed in this paper. In the early 1980s, a deadly and contagious epidemic had begun to appear in the United States and was primarily hitting two marginal and stigmatized groups: homosexual or bisexual men and intravenous drug users. By 1987 AIDS-related mortality had reached 16,461 (Francis 2012, p. 293). However, although the Center for Disease Control and the Surgeon General had provided a good level of understanding of the disease and a focal point for public discussion (Perez and Dionisopoulos 2014; Francis 2012; Shilts 1988), and political mobilization of HIV-infected people had started in some cities as early as 1984, the Reagan administration was reluctant to infuse substantial resources to prevention and education programs, to fund research on AIDS, and to form task forces to deal with AIDS (Francis 2012; Shilts 1988; Fox 1989, p. 60). In addition, there was presidential silence over this public health crisis during 1981-1986 (Perez and Dionisopoulos 2014; Francis 2012; Shilts 1988) even though the powerful information regarding the enormity the disease had become “common knowledge” (Hewitt 2005; Baumgartner 2015).

The intense emotions surrounding AIDS may have significantly contributed to the undersupply of policy in this case. The AIDS epidemic created fear and prejudice (Epstein 1996) which was “so intense that it embrace[d] the entire range of public policy […]” (Fox 1989, p. 59). For most Americans, AIDS seemed “a ghastly retribution for a repulsive vice […]” (Sobran 1986, p. 220). According to Conrad (1989), “It is certain that fear of AIDS was amplified by the widespread and deeply rooted “homophobia” in American society” (p. 780), and that “the fear of contagion fuels the reaction to AIDS” (p. 79). Fear and stigma also led to a resistance to information about AIDS, indicative of which is the finding that “more knowledge was significantly negatively correlated with general fear of AIDS and with anti-gay attitudes among risk groups” (Temoshok et al. 1986, quoted in Conrad 1989). In some parts of the U.S., fear of AIDS verged on hysteria, leading to extensive AIDS-related discrimination (Thomas 1985). Only in 1987, after the number of Americans that had died of the disease was nearing 20,000, and the number of those who were infected with the HIV virus had passed 1 million (Nichols 1989), and after the media attention given to the 1986 Surgeon General's Report on AIDS, had a critical mass been achieved to make the issue a pivotal one, leading to a significant policy investment (Shilts 1988).[2]

Entirely consistent with this argument are Abrajano and Hajnal's (2015) findings that when media coverage adopts the Latino threat narrative, whites who are fearful of immigration tend to respond to that anxiety with a shift to the Republican Party. Additionally, in states with larger and faster growing Latino populations (i.e., where the need for public spending is greatest), there is a propensity to disinvest in public goods provision, especially in the area of education, and increase funding for prisons and criminal justice. This trend is exacerbated by the media's profit-driven incentives to frame immigration in a negative manner, and by Republicans' vote-driven incentives to repeatedly highlight the ills of undocumented immigration and to adopt anti-immigration platforms. This trend is reversed in states wherein the Latino population passes a threshold, that is, when the Latino population is large enough to influence policy on its own following an increase in the number of Latino elected officials (Abrajano and Hajnal 2015).

These examples have the characteristics of processes by which intense emotions regarding the policy audience may have led to systematic undersupply of public policy. The present paper develops this relatively unappreciated explanation by building on robust findings in psychology, indicating that negative emotions exert a great deal of influence on

[2] For a concise list of policies enacted in 1987, see: https://www.aids.gov/hiv-aids-basics/hiv-aids-101/aids-timeline/ (accessed 25.4.2015).

decision making and risk-taking (e.g., Johnson and Tversky 1983). The behavioral understanding advanced here points at a process by which emotionally-driven negative policy bubbles emerge when negative emotions (e.g., fear, anxiety, sadness, grief, anger and hostility) pervade the policy system in four different ways: an endogenous process that affects opinion formation, attention, learning, behavior and attitudes; an exogenous event that "turns on" an endogenous process, emotional manipulation by emotional entrepreneurs, and a process originating in the psychological context within which the policy process takes place. Self-reinforcing processes interact with the contagion of emotions, imitation and herd behavior, as well as with the *mobilization of pessimism* by elected and unelected policy actors, and with the media, which undermine the worth of policy, thereby creating a lock-in effect of systematic undersupply of policy. This may be interrupted following modest perturbations (Pierson 2004), such as endogenous (e.g., a shift in public attention due to short attention span) or exogenous ones (e.g., positive external events); emotion down-regulation by emotional entrepreneurs (Maor and Gross 2015), and a reduction in negativity bias when the information environment becomes predominantly negative (Soroka 2014).

The article proceeds as follows. The second section provides a rationale for integrating emotion as sources of bias, rather than as adaptation, in public policy processes; the third discusses the causes of the birth of an emotionally-driven negative policy bubble, the fourth elaborates on the self-reinforcing processes which interact with the contagion of emotions, imitation and herd behavior to reinforce the lack of confidence in the policy, the fifth elaborates on the measurement of this phenomenon, and the final section presents an agenda for future research.

Why We Seek to Integrate Affect and Emotion in the Study of Policy Dynamics?

The potential role of emotion in policy-making remains relatively unexplored in conventional explanations of the policy process. This is rather surprising given that thought processes, decisions and everyday behaviors may be significantly affected by emotion (Simon 1945). At the outset, dual models of information processing differentiate between the cognitive and affective systems (e.g., Finucane et al. 2003; Kahneman 2011).[3] The former is analytical, slow and governed by rules and normative thought (Kahneman and Frederick 2002), whereas the latter is reflexive and quick as it relies on images, associative links and experiences rather than on thinking.[4] Although the cognitive system may be able to detect biases caused by the affective system, for example, once exposed to statistical information (Kahneman 2011), time constraints and multi-tasking reduces its ability to do so (Isen and Geva 1987).

---

[3] According to Finucane, et al. (2003, p. 328), affect refers to "“goodness” or “badness” (1) experienced as a feeling state […] (2) demarcating a positive or negative quality of a specific stimulus. “Affect is thus critical to identifying stimuli as either rewarding, hence justifying approach, or punishing, thus justifying avoidance” (Brader and Marcus 2013, 167; see also Lodge and Taber 2013).

[4] A recent advance which is based on this distinction posits affect-driven, dual-process modes of thinking and reasoning, that is, that “[…] all thinking is suffused with feeling, and these feeling arise automatically within a few milliseconds […] of exposure to a sociopolitical object or event” (Lodge and Taber 2013, p. 19).

Emotion and affect influence behavior in two distinct ways. First, people anticipate and factor in their likely emotions about the potential consequences of different modes of actions. Second, people may be influenced by immediate emotions experienced at the moment of choice (e.g., Rick and Loewenstein 2010). Two interrelated streams of research ─ one concerns affect (i.e., good/bad feelings) which is represented by the *affect heuristic*, and another concerns *affect-as-information* ─ provide ample evidence of the impact affect and emotion have on subjective probabilities, value, and risk-benefit balance (for a review, see: Finucane 2013). The affect heuristic refers to people's tendency to base their judgment of a product, activity or policy on what they think and feel about it (e.g., Finucane et al. 2000, 5). "If they feel good about a [policy], they tend to judge risks as low and benefits as high; if they feel bad about it, they may judge the opposite […]" (Peters 2011, p. 90). This tendency has been recorded by numerous political scientists and sociologists. For example, the emotional quality of an idea explains why some ideas are more successful than others (Cox and Béland 2013).

The *affect-as-information* literature "asserts that affective reactions serve as information about what one likes or dislikes" (Clore and Palmer 2009, p. 22). According to this line of thought, Zajonc (1980; 1984), Bargh (1984) and LeDoux (1996) have demonstrated that affective reactions to stimuli are faster than cognitive evaluation, and therefore provide a crude assessment of the behavioral options people face. These assessments guide cognitive processes toward potentially high-priority concerns (e.g., Armony et al. 1997; de Becker 1997). The direct impact of affect on attitudes was also evident in the positive relationship recorded between positive affect and problem solving abilities (e.g., Ashby et al. 1999; Isen 2001; 2010). Emotional arousal, for example, increases the accuracy and efficiency of decision making processes (Clore and Storbeck 2006).[5]

An additional stream of research which tries to understand the impact of specific emotions on decision making processes — the *Theory of Affective Intelligence* (Marcus et al. 1995; 2000) — has produced some interesting findings. Fear and anxiety, for example, were found to trigger a surveillance processing system and thereby increase information seeking and deliberation. Anger was found to be leading to heuristic or simplified decision-making (Bodenhausen et al. 1994), as well as to a bias in favor of negative information (Huddy et al. 2007).[6] Perhaps most relevant to the concept developed here, Geva and Skorick (2006) incorporated emotion in the model of Cognitive Calculus of Decision (Geva et al. 2000). They argued that "[…] negative emotions (e.g., fear and anger) reduce the cognitive capacity thereby decreasing the amount of information acquired and processed per choice [and that] these emotions introduce a thematic bias that affect the relevance of the information in correspondence with the theme of the emotion […]" (Geva and Garcia 2013, p. 7). The discussion so far implies that if the goal of policy scholars is to explain

[5] It is important to recognize that "[…] from affect-as-information perspective, the critical factor is not affect itself, but its information value" (Clore and Palmer 2009, p. 26). This, in turn, depends on tacit attributions about the source and apparent meaning of the effect (Schwartz and Clore 1983; Clore and Storbeck 2006), as well as on contextual factors (Martin 2001).

[6] For criticism on this stream of research, see Nadeau et al. (1995), and Valentino et al. (2008).

why people do what they do (Lupia et al. 2000, p. 7), people's emotion regarding the policy at hand must be integrated into their analytical frameworks.

Attention now turns to a conceptual account of the emergence, growth and termination of an emotionally-driven negative policy bubble. Each mechanism discussed here represents a theoretical process hypothesis which can be divided into three sub-hypotheses, reflecting the possibility that emotions or emotional sentiments may cause a negative bubble (i.e., long-term underestimation) in the importance of the policy problem, when one regards a problem as less important than it is objectively; in the policy instrument, when a certain instrument becomes less valuable relative to objective merit, and in the target population, when one regards a target audience as less deserving than it is objectively (Schneider and Ingram 1993).[7] From a conceptual point of view, attention should be directed at the outcome of each of these processes in terms of the demand by the political elite and/or the general public for less policy. Although, in reality, the aforementioned processes may be confounded with each other, the conceptual distinction amongst them is crucial.

How Do Emotionally-driven Negative Policy Bubbles Start?

Existing theories points to four ways in which emotion-driven negative policy bubbles could emerge. The first way is through the independent influence of people's emotions on their choices regarding the policy problem, policy instrument and/or the target population. This endogenous mechanism is well known from research in political psychology. For approach-avoidance theories (e.g., Fishbein and Ajzen 1975; Lodge and Taber 2013), the

---

[7] I thank Ezra Zuckerman for raising this important point.

key idea (read, hypothesis) is that an individual's affect is critical to identifying the policy problem, policy instrument and/or target audience as either rewarding, hence justifying approach, or punishing, hence justifying avoidance. For appraisal theories (e.g., Lazarus 1991; Scherer et al. 2001), the main idea is that emotions bias the cognitive interpretations of the significance of the policy problem, policy instrument and/or target audience. And for neural process theories (Marcus 2002; Marcus et al. 2000), the key idea is that anxiety, enthusiasm or anger may invoke neural processes that in turn influence cognitive and behavioral processes relating to the policy problem, policy instrument and/or target audience.

The second way emotion-driven negative policy bubbles can emerge is when negative emotions pervade the policy system in the wake of an external event (i.e., "exogenous shock"), in a sudden or in a slow-motion mode. This mechanism is based on an exogenous event that "turns on" an endogenous process by increasing the valence of affective states. For example, an external event may create *policy mood*, defined as the general dispositions of the public regarding a public policy (e.g., Page and Shapiro 1983; 1992; Stimson 1999). Mood influences whether people focus on the forest or on the trees (Zadra and Clore 2011, p. 3): People in a negative mood tend to adopt a local perceptual style, as opposed to a global perception generated by a positive mood (Gasper and Clore 2002). The fact that certain policies may generate negative emotional reactions (Cox and Béland 2013, p. 315) and negative mood, combined with the findings that policy mood has been an important determinant of U.S. public policy (e.g., Page and Shapiro 1983; Wlezien 1995; see also Burstein 2003 for a review) as well as policies of other governments (e.g., Franklin and Wlezien 1997; Quinn and Toyoda 2007), indicate the potential outcomes which may be derived from negative policy bubbles generated by these emotional sentiments.

At the core of the third way is the idea that emotional entrepreneurs (Maor and Gross 2015) up-regulate (i.e., increase) the valence of negative emotions regarding the policy problem, policy instruments and/or target population. This mechanism is well known from research on the use of fear mongering to stir public opinion, the use of outrage at opposition members to cue in-group members to participate in action against the out-group members who have committed the outrage, the use of emotion-laden appeals to garner public support on the issue of terrorism, the use of emotion regulation to change political attitudes in intractable conflicts, the use emotions to effect foreign policy outcomes, and the use of emotion to mobilize and demobilize members of social movements involved in protest politics (for a review of these literatures, see: Maor and Gross 2015).

A salient example from the domain of welfare policy revolves around the long-standing policy response of the U.S. government to the problem of poor African American mothers (Hancock 2004). During the 1995-6 debates about welfare reform, politicians prepared the ideological justification for continued reliance of poor African American mothers on welfare rather than achieving a permanent departure from the welfare rolls by ascribing racial stereotypes that have stirred up disgust to members of the aforementioned group. Targeting the public identity of the "welfare queen," politicians have labeled welfare recipients as lazy, black and hyperfertile; they have pointed to the animal-like qualities of this group (e.g., brood mares, alligators, wolves or mules), and have framed public understanding in a way that limited the range of conceivable policy prescriptions.

Following the denial of welfare recipients' political legitimacy, woman lawmakers advocated the continuation of child support as a policy option designed to lift families out of poverty, despite research showing the greater efficacy of a college education and livable wages in achieving permanent departure from the welfare rolls (Hancock 2004).

The fourth way for the emergence of emotion-driven negative policy revolves around the psychological context within which policy actors operate. The key idea is that emotions may be experienced by individuals because of their identification with particular groups (e.g., Smith and Mackie 2008), including enduring sentiments in contexts of intergroup conflicts, such as the Israeli-Palestinian one (Bar-Tal et al. 2007). For example, an emotional climate (e.g., de-Rivera 1992) of hate may delegitimize a policy audience; a climate of despair may lead to the view that the policy problem is irresolvable; a climate of fear may lead to the view that there is low control over the situation; a climate of hatred may lead to the view that it is impossible for a positive change to take place; and a climate of disgust in the realm of moral punity (Schnall et al. 2008), such as in the case of homosexuals infected with AIDS, may lead to the view that no policy is necessary because the policy audience "deserved" their illness. The narrowing of possible courses of action to a specific set of behavioral options is based on the fact that many theories which focuses on negative emotions link each emotion to a distinct action tendency (e.g., Frijda 1986; Frijda et al. 1989; Lazarus 1991).

Prolonged situations which evoke emotions may lead not only to narrow response tendencies but also to less flexible tendencies, thereby contributing to the continuation of policy underreaction. In addition, some emotional repertoires regarding a policy may become culturally approved emotional orientations following a process of socialization

(Fiske et al. 1998), and this, in turn, may lead to the continuation of policy underreaction. Attention now turns to the feedback mechanisms that propel such processes, and lead to the growth of an emotionally-driven negative policy bubbles.

How Do Emotionally-driven Negative Policy Bubbles Grow?

For an emotionally-driven negative policy bubble to grow, negative emotions should propel self-reinforcement processes. Existing theories point to three ways this could occur. The first way is through reinforcing spirals of negative emotions. At the outset, negative events may exert a long-lasting impact on memory (e.g., Ybarra and Stephen 1996) and psychological distress (Wells et al. 1999), as well as powerful effects on daily mood (David et al. 1997), forecasting (Gilbert et al. 1998), neurological processes (Smith et al. 2003), and physiological ones (Taylor 1991). When accompanied by loss aversion behavior (e.g., Tversky et al. 1990), people may tend to have stronger short-term reactions to negative events, behavior and information.

Emotional states can affect people's cognitive assessment of risk (e.g., Johnson and Tversky 1983). "These cognitive evaluations, in turn, can affect the individual's emotional states. Because these effects exert reciprocal self-reinforcing influences, there is a potential for self-reinforcing feedback effects" (Loewenstein et al. 2001, p. 278). According to Lang (1995), for example, fear increases arousal and this, in turn, increases new fear. Furthermore, (collective) depression in the aftermath of a disaster may preclude attention and action. This may also characterize states in which important positive reinforcers regarding a particular policy, such as positive news, have been absent for a considerable time. Although the political elite and the general public may respond differently to negative events, negative emotions may trickle down over time from policymakers to the general public (or vice versa), subduing people's appetite for risk and high expectations, thereby leading to the gradual inflation of an emotionally-driven negative policy bubble.

The second way revolves around self-reinforcing effects of policy calibration. The longer the policy appears calibrated (Lichtenstein et al. 1981, p. 307) — that is, there is a relatively high correspondence between pessimistic policy predictions and their actual occurrence — the more over-pessimistic the policymakers become. The same process may occur with the general public. Policymakers and individuals who are over-pessimistic may put less effort into looking outside their social group when searching for new sources of information. They may also fail to draw on valuable outside information, even when that information could easily be obtained (Janis 1972). In this "willful blindness", "mounting warning signals [are] systematically cast aside or met with denial, evidence avoided or selectively reinterpreted, dissenters shunned" (Bénabou 2011, p. 1). Situations which are vulnerable to the development of such overly pessimistic expectations by policy makers and/or the general public may be recorded during catastrophic events, national grief, national and international failures, and so on. Such conditions, as well as weakening confidence in government leaders and political institutions, may render *mobilization of pessimism* possible.

The third way revolves around self-reinforcing effects of serial information processing (Simon 1983). Attentional limitation implies that people cannot possibly be attuned to all the information available and to all dimensions of choice at any time. Once people pay attention to limited and/or negative information regarding the policy at hand, their decision to avoid the policy is determined. Afterwards, attention is shifted toward new issues — a movement termed "serial shift" (Jones 1994) — as new information and dimensions of choice emerge. Self-reinforcing processes at the individual level are heavily affected by attention shifting (Baumgartner and Jones 2002).

Emotional Contagion

A move from parallel to serial processing is always accompanied by participants' emotional arousal (Jones 1994), which, in turn, may result in shifts in attentiveness. When these shifts involve a public policy surrounded by negativity, emotional contagion may emerge. Person-to-person contagion of emotions, spurred by a negative event or a change in the mode of thinking, may amplify pessimistic stories, rumors and stigmas regarding the policy, thereby feeding an emotionally-driven negative policy bubble. "Just as diseases spread through contagion, so does confidence, or the lack of confidence […] Epidemics of confidence or epidemics of pessimism may arise mysteriously simply because there was a change in the contagion rate of certain modes of thinking" (Akerlof and Shiller 2009, p. 56). As a policy is bashed, the demand for the policy declines faster and faster, reinforcing the stories and the common wisdom about the value of the policy, imbuing stories about the policy with no-go signs, and reaffirming people's mental models (Ostrom 2005) regarding the policy at hand. Because people rarely make decisions in a social vacuum, the informational value of these stories becomes detrimental to the growth of an emotionally-driven negative policy bubble. Here, emotions may enter into the fray, affecting people's choices in the relevant policy sub-system. In such a situation, a feeling prevails that everything can go wrong with a policy. When people's confidence is weak and pessimism mushrooms, people's activity in relation to the policy at hand will be subdued.

Imitation and Herd Behavior

People's activity in a given policy area requires information, some of which may be learned from others (e.g., peers and non-peers) through communication and persuasion, as well as through mimicking and cue-taking (Baumgartner and Jones 2002). Cue-taking and imitation often lead to distortions and exaggerations by spreading information, rumors and gossip. In its strongest manifestation, imitation leads to herding behavior. "Herding occurs when individuals' private information is overwhelmed by the influence of public information about the decisions of a herd or group" (Baddeley et al. 2012, p. 2). Imitation may therefore be the key factor that communicate lack of confidence in the policy to others, inflate pessimistic expectations regarding the policy, and thereby propels the persistence of an emotionally-driven negative policy bubble. In this case, sources of herding may include excessive pessimism and extreme risk aversion (e.g., Minsky 1986), uncertainty (Baddeley 2013, p. 227), and negative emotions, such as fear (Baddeley 2013, p. 229) and anxiety, a situation which "does not allow effective means of coping" (Öhman 2010, p. 724).

In these situations, self-reinforcing processes gain explanatory force when there are strong sources of herding (e.g., Asch 1952; Banerjee 1992; Scharfstein and Stein 1990). Herding therefore constitutes an essential element in emotionally-driven negative policy bubbles. Self-reinforcing processes involve a correlation between human herding and policy payoffs. As long as there is anticipation for lower policy payoffs, self-reinforcing processes of low hopes overcome self-correcting processes of high expectations. However, since persistent policy cost cannot occur forever, elements of diminishing returns, at some point in time, are bound to replace these self-reinforcing processes.

Lock-in Effect and the Role of the Media

Self-reinforcing processes may result in a lock-in effect (Pierson 2004) which occurs when underinvestment in policy deepens due to self-reinforcement. Existing theories point to numerous ways in which lock-in effect may emerge. Lock-in effect may occur when external threats or shock paralyze decision makers, thereby leading to the maintenance of the status quo. Furthermore, loss aversion behavior (e.g., Tversky et al. 1990), blame avoidance considerations (Weaver 1986; Hood 2010), problem denial (Cobb and Ross 1997), and congealed preferences (Riker 1980) may all make policy reversal very difficult. The establishment of coalitions which share deep beliefs and coordination patterns (Sabatier and Jenkins-Smith 1999), and the establishment of policy monopolies (Baumgartner and Jones 2009) may have the same effect. This is because they maintain the false consensus and the limited intellectual perspective by ignoring contrarian views — made by those who find themselves outside of these coalitions and the institutional settings that endorse the particular policy — thereby encouraging herd mentality and solidifying the institutional structure that gives this perspective legitimacy.

Lock-in effect may also occur when people internalize the causal story which is strategically communicated by policy actors and shapes the policy problem (Stone 2011), and when they become emotionally and/or cognitively committed to the policy (underreaction) at hand. It may also emerge when government commitment to undersupplying the policy becomes the status quo due to bureaucratic incentives, when entrenched interests protect their gains from the underinvestment in policy.

The role of the media in underemphasizing or undermining the worth of policy, thereby creating a lock-in effect, is of paramount importance. The media may demote a policy by intensively reporting negative news about it and creating a disinvestment culture around it. For example, the U.S. media has intensively covered environmental disasters such as the Exxon Valdez oil spill in 1989, but has ignored successful implementation of environmental regulation, such as the improvement of U.S. surface water quality since 1960 (e.g., Lake Erie along with other waterways) and air quality since 1970 (Bailey 1993; Koger and Winter 2010, p. 20). Another example is the finding that "when the issue of immigration is brought to the attention of the [U.S.] public, it is generally with an emphasis on the negative consequences of immigration" (Abrajano and Hajnal 2015, 20), such as the talk of the sleeping "Latino giant" (p. 30).

Given that the media does have an influence on governing elites when salient issues directly experienced by the public are concerned (Soroka 2002), and that it has an influence on the salience of particular issues (McCombs 2005), one could reasonably expect that the negative information generated by the media might result in the undersupply of policy. The fact that media content, public opinion, and the design of political institutions tend to focus on negative information (Soroka 2014) may further exacerbate this process. According to an alternative causal path, commonly known as indexing theory (e.g., Bennett 1990; for empirical support see: Jones and Wolfe 2010), politicians, who may gain from the undersupply of policy, tell the media to write about the poor performance of the policy, the streams of costs derived from the policy, the policy's negative forecasts, and so on. Politicians, according to this line of explanation, may manipulate the magnitude of negativity bias.

Negative information, supplemented by other sources, may contribute to the creation of *familiarity bias* (Tversky and Kahneman 1974), letting people think that they know and understand the intricate details of a policy. It may also create emotional detachment from the policy, a decrease in the dispersion of opinions in society, and the formation of more negative assessments of the policy. This process may be accelerated when intertwined with shifts in the socialization of negative emotions, that is, when these emotions are culturally scripted as to "when" to feel and "how" to express these feelings (e.g., Gordon 1981; Peterson 2006).

The creation of disenchantment with the policy and lowering expectation regarding its future may furthermore let people believe that the policy offers no potential, and that it will create streams of costs to those who subscribe to it. The derived skepticism may persuade people that the policy may be moving in one direction only, and this, in turn, may subsequently lead to self-reinforcing processes with the effects of degenerative policy spirals (Schneider and Ingram 1997) and undersupply of the policy. In addition, lack of media attention and policy activities may also become entangled in cyclical feedback processes as it may lead to less policymaking activity, which, in turn, may lead to no media and public attention.

A lock-in effect may also emerge under the radar of the media. This may occur by slow-moving processes, when people's pessimism or over-pessimism is amplified by *self-*

attribution bias (e.g., Gervais and Odean 2001) and the *illusions of control* (Langer 1975), rather than by the media coverage of the policy at hand. Needless to say, different emotionally-driven negative policy bubbles are likely to have different self-reinforcing mechanisms, and the processes which are by and large responsible for these mechanisms may operate independently of one another.

How Do Emotionally-driven Negative Policy Bubbles Burst?

Emotions do not operate in a vacuum, and so is the hypothesized cyclical process described above. This emotion-driven process will remain the same until self-reinforcing processes are interrupted or terminated. Existing theories point to three possible ways in which emotion-driven negative policy bubbles could burst. First, an emotion-driven negative policy bubble may burst following modest perturbations (Pierson 2004) for various reasons, such as endogenous (e.g., a shift in public attention due to short attention span, changes in society members' needs and goals, disruption in the mechanism by which emotional contagion operates) as well as exogenous ones (e.g., positive external events which redirect attention or has positive psychological implications). This implies that some emotionally-driven negative policy bubbles may burst instantly, for example, due to an external event, while other may burst in an inertial way. To complicate matters further, the variation in the way an emotion-driven negative policy bubble bursts may also depend on the type of emotions involved: fear-driven negative bubbles may burst differently than hate- or shame-driven ones because of the different impact of each emotion on motivation for personal and policy action, policy opinions, information processing, and decision making, and because of different self-reinforcing process.

Second, the burst of emotion-driven negative policy bubbles may occur because negativity bias shifts in periods of predominantly positive or negative information. According to Soroka (2014):

> The negativity bias is reduced when the information environment becomes predominantly negative. This helps explain why we are not endlessly negative – at the same point, when things are particularly bad, we start focusing on the positive. This finding opens up the possibility that negativity in politics is self-correcting (p. 48).

Third, the burst of emotion-driven negative policy bubbles may also occur due to institutional efforts to down-regulate emotions. While there is a small body of research on the use of emotional appeals in elections or other campaigns in an attempt to sway audiences (e.g., Brader 2006), as well as on the use of emotional strategies in political communication (e.g., Brader and Corrigan 2005), research on emotion control in political processes is relatively rare. Still, emotion-driven negative policy bubbles may be considered by institutional players as occasions for down-regulating public emotions by, for example, suggesting moderate frames of policy-related aspects or events in order to lead to moderate cognitive appraisals (Maor and Gross 2015). The success of institutional strategies, however, will depend on the society's emotional climate as well as its collective emotional orientation. In a society characterized by high fear and low trust, institutional attempts to control emotions may be perceived with a flavor of suspicion.

The burst of an emotionally-driven policy bubble can wreak havoc on the policy system, especially if the government is unable to meet the sudden growing demand for the policy at hand. The more severe the consequences of a bubble burst are, the more relevant the burst of the bubble is. Modeling the aforementioned dynamics is a major challenge facing policy scientists.

Identifying Emotionally-driven Negative Policy Bubbles

The identification of negative policy bubbles requires scholars to ascertain the level of government underreaction or underinvestment in the policy instrument, the self-reinforcing mechanism, and the extended period of time. The difficulty inherent in gauging the former variable is obvious. The level of government underreaction or underinvestment in a policy instrument requires first and foremost the measurement of the appropriate or proportionate level of government reaction or investment. But this, in turn, is often the product of advocacy (e.g., Burstein 2014; Baumgartner et al. 2009). Even the reliance on cost-benefit analysis, regulatory impact analysis, the views of the professional community and other policy valuation methods is not without problems. Therefore, one should preferably measure the changes in the levels of true and observed policy valuation over an extended period of time (e.g., 50 years). Doing so may enable the establishment of a reliable base-line of these two variables, thereby facilitating an analysis of the causes of substantial changes in these variables.[8]

However, doing so may also raise an important question: How do we know whether a change in the level of true policy valuation will bring it back to an appropriate level of policy response or to an overreaction level. It is reasonable to suggest that when the effects of the policy response on different segments of society are widely disproportionate, the response could be classified as a policy overreaction. An example that springs to mind is the dramatic rise in the arrest rate in New York City for lower-level crimes — the brunt of which fell on young black and Hispanic men — which eclipsed arrests for more serious

[8] I thank Frank Baumgartner for raising this important point.

offenses. The arrest rate for these more minor crimes had risen 190 percent by 2013, when the police made 225,684 such arrests (Chauhan et al. 2014).

Once one identifies a negative policy bubble, the next step is to gauge whether it is emotionally-driven. There are four perspectives which can be used in the identification and measurement of emotion-driven negative policy bubbles. An *attentional perspective* involves measuring the valence and emotional content of congressional/parliamentary and media concerns, and public opinion regarding the policy at hand, preferably over 50 years or more, combined with the severity of the policy problem and government investment in a policy instrument. An emotionally-driven negative policy bubble will be identified if congress/parliament, the media or public opinion builds up emotionally-driven negative concerns regarding a public policy. This is follows by a decline in government investment in a policy instrument despite an increase, at some point, in the severity of the policy problem.

A *transmission perspective* for the identification of an emotionally-driven negative policy bubble involves measuring the operation of different transmission mechanisms in human herding. I refer here particularly to mechanisms by which people infer other people's emotions regarding the policy problem, policy instrument and/or target population. Sentiment analysis of verbal and non-verbal communication in social networks, especially instant messaging, may capture emotional contagion (e.g., Feldman 2013). The process whereby emotional contagion spreads throughout social networks with or without people awareness can also be investigated by using formal analysis, agent-based modeling, and data mining (Barash 2011). Emotional contagion can also be measured by employing the Emotional Contagion Scale, or by assessing the extent to which people mimic others' facial, vocal, and postural expressions (Hatfield et al. 2014).

An *attitudinal perspective* for the identification of an emotionally-driven negative policy bubble revolves around studying pessimistic expectations and individuals' lack of confidence in a policy over time (Shiller 2000). The idea here is to complement an analysis of the historical and institutional context within which people make their opinion of public policies, with a direct examination of people's attitudes regarding the value of policies. Scholars may use surveys and interviews in an attempt to gauge whether the political elite and/or the general public believe the policy problem, policy instrument and/or target population is undervalued, without priming the idea of a negative policy bubble. Scholars may also ascertain the prevailing beliefs of the aforementioned groups regarding the value others attach to the policy at hand. In both cases scholars should gauge the possible emotional motive undergirding those beliefs. Surveys and interviews may also be utilized to gauge peoples' perception of the value of the policy problem, the policy instrument and the target population before and after policy adoption and/or policy implementation, when more people are directly influenced by the policy.

If the majority of the respondents regard the policy as undervalued, the researchers may analyze emotion-related processes that could be attributed to the demand of the general public and/or the political elite for less policy. The researchers may examine the impact individuals' emotion and emotional sentiments, external shocks, emotion regulation strategies, and the psychological context of the policy process, may have had on the level of policy demand exerted by the political elite and the general public. Similar techniques may be used to test *group-based* emotions that derive from the emotional experiences of an individual in response to group-related events (e.g., Smith, 1993; Iyer and Leach 2008), and *collective* emotions that arise when the society as a whole, or its parts thereof, experience the emotions (e.g., Niedenthal and Brauer 2012).

An experimental perspective revolves around examining the role of emotions in the life-cycle of emotion-driven negative policy bubbles. Participants may take part in a laboratory policy domain in which they make demands for more or less policy. Prior to these decisions, the participants' emotional state may be manipulated with short videos; for example, a positive emotion (excitement) may be compared with two negative emotions (fear and sadness), and with one unemotional intervention (neutral). After the emotion induction, participants may take part in a policy domain simulation. Negative policy bubbles may be measured and compared across the four conditions. Throughout this experiment, emotional responses may be measured by electroencephalographic (EEG) techniques, functional magnetic resonance imaging (fMRI) and other biologically oriented methods.

Finally, in field settings, emotional manipulation/regulation may be measured by using interventions outside the lab, such as conveying messages through the education system, dialogue groups, dramatic performances and soap operas, as well as the use of reappraisal training (or not – control group) to survey participants (for a review, see: Halperin 2014).

Conclusions

This paper argues for a new way of approaching systematic policy underreaction or underinvestment in a policy instrument by highlighting the role of emotions, rather than institutional and cognitive factors, in policy processes. It provides theoretical support for the claims that emotionally-driven negative policy bubbles emerge when negative emotions pervade the policy system, that the key mechanisms for the growth of such bubbles are self-reinforcing and interact with the contagion of emotions, imitation and herd behavior to reinforce the lack of confidence in the policy, that various emotionally-driven negative policy bubbles may have different self-reinforcing mechanisms, that such bubbles always involves undersupply of policy because of self-reinforcing processes, and that emotionally-driven negative policy bubbles cannot be sustained forever.

If validated, these assertions may indicate that there are distinct policy processes worthy of academic attention because they can explain variations in systematic policy underreaction or underinvestment in a policy instrument in a much more nuanced way than the notion of "error accumulation" (Jones and Baumgartner 2005). In addition, emotion-driven negative bubble may be the result of deliberate manipulation by emotional entrepreneurs (Maor and Gross 2015). So, in this sense, the notion of an "error" may be misleading. Furthermore, these assertions also represent a more nuanced view on policy image, which is based on a reliance of individuals on one set of facts at a time (Baumgartner and Jones 2009). By highlighting the emotional biases in the interpretation of reality, attention is directed at a possible outcome which may be only remotely related to the facts of the policy at hand (e.g., vaccine hysteria).

In addition to testing the process hypotheses put forward so far, future research may try to gauge how the state of emotion towards a particular policy changes over time, and how such changes impact upon the supply of the policy at hand. Scholars of public policy and emotions could test the hypothesis that variation in policy familiarity generates different causal routes by which people develop action tendencies, physiological responses, expressive behavior and feelings towards public policies. This is because the more encounters people have with policies, the more automatic emotions become. Using experimental manipulation that produces emotion-free and emotion-related policy outcomes, future research could gauge the way people appraise information generated by the media regarding policy performance, the streams of costs derived from the policy, and the negative forecasts of the policy. Thereafter, scholars may examine the impact of people's appraisals of the policy on their self-reported subjective experiences and the impact of these experiences on their demand for policy.

Another exciting direction for research revolves around the description of emotion specifications (Clore and Ortony 2013). Here, the focus is less on emotional patterns of response (i.e., a process model) and more on the policy situations they represent. Future research may distinguish between policy outcomes, policy strategies, and target populations. One can be happy or sad about policy outcomes, can be proud or ashamed of policy strategies, and can like or dislike the target populations. The challenge of this approach is to distinguish emotions in terms of their core situational meanings and to comprehend the extent to which they reflect reactions for coping with particular policy situations.

Although the framework presented here is speculative, its main cornerstones rely on valid empirical findings from the study of emotions. The important task facing public policy scholars is to verify or falsify the claims proposed here.

References

Abrajano, M. & Zoltan, L. H. (2015) *White Backlash: Immigration, Race, and American Politics*. Princeton, N.J.: Princeton University Press.

Akerlof, G. A. & Shiller, R. J. (2009). *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism*. Princeton, NJ: Princeton University Press.

Armony, J. L., Servan-Schreiber, D., Cohen, J. D. & LeDoux, J. E. (1997). Computational Modeling of Emotion: Explorations through the Anatomy and Physiology of Fear Conditioning. *Trends in Cognitive Sciences*, 1, 28-34.

Asch, S. (1952). *Social Psychology*. Englewood Cliffs, NJ: Prentice-Hall.

Ashby, G. F., Isen, A. M. & Turken, U. (1999). A Neuropsychological Theory of Positive Affect and Its Influence on Cognition. *Psychological Review*, 106, 529-550.

Baddeley, M. (2013). *Behavioral Economics and Finance*. London: Routledge.

Baddeley, M., Burke, C., Schultz, W. & Tobler, P. (2012). Herding in Financial Behavior: A Behavioral and Neuroeconomic Analysis of Individual Differences. *Cambridge Working Papers in Economics* 1225. Faculty of Economics, University of Cambridge.

Bailey, R. (1993). *Eco-scam: The False Prophets of Ecological Apocalypse*. New York, NY: St. Martin's Press.

Banerjee, A. V. (1992). A Simple Model of Herd Behavior. *The Quarterly Journal of Economics*, 107, 797-817.

Barash, V. (2011). The Dynamics of Social Contagion. Unpublished Ph.D Thesis, Faculty of the Graduate School of Cornell University. Ithaka, NY: Cornell University.

Bargh, J. A. (1984). Automatic and Conscious Processing of Social Information. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of Social Cognition* (pp. 1-43). NJ, Hillsdale: Erlbaum.

Bar-Tal, D., Halperin, E. & de Rivera., J. (2007). Collective Emotions in Conflict: Societal Implications. *Journal of Social Issues*, 63, 441-60.

Baumgartner, F.R. (2015). Policy Competition and Friction. Paper presented at the ECPR workshop on The Politics of Non Proportionate Policy Response, Warsaw, March.

Baumgartner, F. R., Berry, J. M., Hojnacki, M., Kimbell, D. C. and Leech, B. L. (2009a). *Lobbying and Policy Change: Who Wins, Who Loses, and Why?* Chicago: The University of Chicago Press.

Baumgartner, F. R., Breunig, C., Green-Pedersen, C., Jones, B. D., Mortensen, P. B., Nutemans, M. & Walgrave, S. (2009b). Punctuated Equilibrium in Comparative Perspective. *American Journal of Political Science*, 53(3), 603-620.

Baumgartner, F. R. & Jones, B. D. (2002). Positive and Negative Feedback in Politics. In Baumgartner F. R. & Jones B. D. (Eds.), *Policy dynamics* (pp. 3-28). Chicago: Chicago University Press.

Baumgartner, F. R. & Jones, B. D. (2009). *Agendas and Instability in American Politics*, 2 ed. Chicago: The University of Chicago Press.

Bennett, W. L. (1990). Toward a Theory of Press-State Relations in the United States. *Journal of Communication*, 40, 103-125.

Bénabou, R. (2011). Groupthink: Collective Delusions in Organizations and Markets. *Working Paper*. http://www.nber.org/papers/w14764.pdf Accessed 17 December 2014.

Bodenhausen, G. V., Sheppard, L. A. & Kramer, G. (1994). Negative Affect and Social Judgment: The Differential Impact of Anger and Sadness. *European Journal of Social Psychology*, 24, 45-62.

Brader, T. (2006). *Campaigning for Hearts and Minds: How Emotional Appeals in Political Ads Work*. Chicago: University of Chicago Press.

Brader, T. & Corrigan, B. (2005). Emotional Cues and Campaign Dynamics in Political Advertising. *Proceedings from Annual Meeting of the American Political Science Association*. Washington DC.

Brader, T. & Marcus, G. E. (2013). Emotion and Political Psychology. In Huddy, L., Sears, D. O. & Levy, J. S. (Eds.), *The Oxford Handbook of Political Psychology* (pp. 165-204). 2nd edn. Oxford: Oxford University Press.

Brader, T., Marcus, G. E. & Miller, K. L. 2011. Emotion and Public Opinion. In Edwards III, G. C., Jacobs L. R. & and Shapiro R. Y. (Eds.), *The Oxford Handbook of American Public Opinion and the Media* (pp. 384-401). Oxford: Oxford University Press.

Burstein, P. (2003). The Impact of Public Opinion on Public Policy: A Review and an Agenda. *Political Research Quarterly*, 56, 29-40.

Burstein, P. (2014). *American Public Opinion, Advocacy, and Policy in Congress: What the Public Wants and What it Gets*. New York; Cambridge University Press.

Chauhan, P., Fera, A.G., Welsh, M.B., Balazon, E., & Misshula, E. (2014). *Trends in misdemeanor arrest rates in New York*. Report Presented to the Citizens Crime Commission. New York: New York.

Clore, G. L. & Palmer, J. (2009). Affective Guidance of Intelligent Agents: How Emotion Controls Cognition. *Cognitive Systems Research*, 10, 21-30.

Clore, G. L. & Ortony, A. (2013). Psychological Construction in the OCC Model of Emotion. *Emotion Review*, 5, 335-343.

Clore, G. L. & Storbeck, J. (2006). Affect as Information about Liking, Efficacy, and Importance. In Forgas, J. P. (Ed.), *Affect in Social Thinking and Behavior* (pp. 123-142). New York, NY: Psychology Press.

Cobb, R. W. & Ross, M. H. (1997). Agenda Setting and the Denial of Agenda Access: Key Concepts. In Cobb, R. W. & Ross, M. H. (Eds.), *Cultural Strategies of Agenda Denial* (pp. 3-24). Lawrence, KS: University Press of Kansas.

Conlan, Timothy J., Paul L. Posner and David R. Beam. 2014. *Pathways of Power: The Dynamics of National Policymaking*. Washington, DC: Georgetown University Press.

Conrad, P. (1989). The Social Meaning of AIDS. In Rist, R. C. (Ed.), *Policy Issues for the 1990s* (pp. 75-88). Policy Studies Review Annual, Vol. 9, New Brunswick: Transaction Publishers.

Cox, R. H. & Béland, D. (2013). Valence, Policy Ideas, and the Rise of Sustainability. *Governance*, 26, 307-328.

David, J. P., Green, P. J., Martin, R. & Suls, J. (1997). Differential Roles of Neuroticism, Extraversion, and Event Desirability for Mood in Daily Life: An Integrative Model of Top-Down and Bottom-Up Influences. *Journal of Personality and Social Psychology*, 73(1), 149-159.

de Becker, G. (1997). *The Gift of Fear: Survival Signals that Protect Us From Violence*. Boston: Little, Brown, and Company.

de Rivera, J. (1992). Emotional Climate: Social Structure and Emotional Dynamics. In Strongman, K. T. (Ed.), *International Review of Studies on Emotion vol. 2*. New York, NY: John Wiley.

Epstein, S. (1996). *Impure Science: AIDS, Activism, and the Politics of Knowledge*. Berkeley: University of California Press.

Feldman, R. (2013). Techniques and Applications for Sentiment Analysis. *Communications of the ACM*, 56, 82-89.

Finucane, M. L. (2013). The Role of Feelings in Perceived Risk. In Roeser, S., Hillerbrand, R., Sandin, P. & Peterson, M. (Eds.), *Essentials of Risk Theory* (pp. 57-74). Dordrecht: Springer.

Finucane, M. L., Alhakami, A., Slovic, P. & Johnson, S. M. (2000). The Affect Heuristic in Judgment of Risks and Benefits. *Journal of Behavioral Decision Making*, 13, 1-17.

Finucane, M. L., Peters, E. & Slovic, P. (2003). Judgment and Decision Making: The Dance of Affect and Reason. In Schneider, S. & Shanteau, J. (Eds.), *Emerging Perspectives on Judgment and Decision Research* (pp. 327-364). Cambridge: Cambridge University press.

Fishbein, M. & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Fisk, A., Kitayama, S., Markus, H. & Nisbet, R. E. (1998). The Cultural Matrix of Social Psychology. In Gilbert, D., Fiske, S. & Lindzey, G. (Eds.), *The Handbook of Social Psychology* (pp. 915-981). 4th edn. San Francisco, CA: McGraw Hill.

Forgas, J. P. (1992). Affect in Social Judgments and Decisions: A Multiprocess Model. In Zanna, M. P. (Ed.), *Advances in Experimental Social Psychology* (pp. 227-275). San Diego, CA: Academic Press, Vol. 25.

Fox, D. M. (1989). AIDS and the American Health Polity: The History and Prospects of a Crisis of Authority. In Rist, R. C. (Ed.), *Policy Issues for the 1990s* (pp. 75-88). Policy Studies Review Annual, Vol. 9, New Brunswick: Transaction Publishers.

Francis, D. P. (2012). Deadly AIDS Policy Failure by the Highest Levels of the US Government: A Personal Look Back 30 Years Later for Lessons to Respond Better to Future Epidemics. *Journal of Public Health Policy*, 33, 290-300.

Franklin, M. N. & Wlezien, C. (1997). The Responsive Public: Issue Salience, Policy Change and Preferences for European Unification. *Journal of Theoretical Politics*, 9(3), 347-363.

Frijda, N. H. (1986). *The Emotions*. Cambridge: Cambridge University Press.

Frijda, N. H., Kuipers, P. & Schure, E. (1989). Relations among Emotion, Appraisal, and Emotional Action Readiness. *Journal of Personality and Social Psychology*, 57, 212-228.

Gasper, K. & Clore, G. K. (2002). Attending to the Big Picture: Mood and Global versus Local Processing of Visual Information. *Psychological Science*, 13, 34-40.

Gervais, S. & Odean, T. (2001). Learning to be Overconfident. *Review of Financial Studies*, 14, 1-27.

Geva, N. & Garcia, B. E. (2013). The Emotional Calculus of Public Support for Counterterrorism. Paper delivered at the annual conference of the International Society of Political Psychology, July, Israel.

Geva, N., Mayhar, J. & Skorick, M. (2000). The Cognitive Calculus of Foreign Policy Decision Making: An Experimental Assessment. *Journal of Conflict Resolution*, 44(4), 447-471.

Geva, N. & Skorick, M. (2006). The Emotional Calculus of Foreign Policy Decisions: Getting Emotions out of the Closet. In Redlawsk, D. P. (Ed.), *Feeling Politics: Emotion in Political Information Processing* (pp. 209-226). New York: Palgrave Macmillan.

Gilbert, D. T., Pinel, E. C., Wilson, T. D., Blumberg, S. J. & Wheatley, T. P. (1998). Immune Neglect: A Source of Durability Bias in Affective Forecasting. *Journal of Personality and Social Psychology*, 75, 617-638.

Gordon, S. L. (1981). The Sociology of Sentiments and Emotion. In Rosenberg, M. & Turner, R. H. (Eds.), *Social Psychology: Sociological Perspectives* (pp. 562-92). New York: Basic Books.

Hacker, J. S. (2004). Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Retrenchment in the United States. *American Political Science Review*, 98, 243-60.

Haidt, J. (2012). *The Righteous Mind: How Good People are Divided by Politics and Religion*. New York: Pantheon Books.

Halperin, E. (2014). Emotion, Emotion Regulation, and Conflict Resolution." *Emotion Review*, 6, 68-76.

Hancock, A-M. (2004). *The Politics of Disgust: The Public Identity of the Welfare Queen*. New York: New York University.

Hatfield, E., Carpenter, M. & Rapson, R. L. (2014). Emotional Contagion as a Precursor to Collective Emotions. In von Scheve, C. & Salmela, M. (Eds.), *Collective emotions* (pp. 108-121). Oxford: Oxford University Press.

Hewitt, Roger. (2005). *White Backlash and the Politics of Multiculturalism*. Cambridge: Cambridge University Press.

Hood, C. (2010). *The Blame Game: Spin, Bureaucracy, and Self-Preservation in Government*. Princeton, NJ: Princeton University Press.

Huddy, L., Feldman, S. & Cassese, E. (2007). On the Distinct Political Effects of Anxiety and Anger. In Neuman, W. R., Marcus, G. E., MacKuen, M. & Crigler, A. N. (Eds.), *The Affect Effect: Dynamics of Emotion in Political Thinking and Behavior* (pp. 203-230). Chicago: The University of Chicago Press.

Hutchison, E. & Bleiker, R. (2014). Theorizing Emotions in World Politics. *International Theory*, 6 (3), 491-514.

Isen, A. M. (2001). An Influence of Positive Affect on Decision Making in Complex Situations: Theoretical Issues with Practical Implications. *Journal of Consumer Psychology*, 11(2), 75-85.

Isen, A. M. (2010). Some Ways in Which Positive Affect Influences Decision Making and Problem Solving. In Lewis, M., Haviland-Jones, J. M. & Feldman-Barrett, L. (Eds.), *Handbook of Emotions* (pp. 548-573). New York: Guilford Press, 548-573.

Isen, A. M. & Geva, N. (1987). The Influence of Positive Affect on Acceptable Level of Risk: The Person with a Large Canoe has a Large Worry. *Organizational Behavior and Human Decision Processes*, 39, 145-154.

Jacobs, A. M. (2011). *Governing for the Long Term: Democracy and the Politics of Investment*. Cambridge: Cambridge University Press.

Janis, I. L. (1972). *Victims of Groupthink: Psychological Studies of Policy Decisions and Fiascos*. Boston, MA: Houghton Mifflin Company.

Johnson, E. J. & Tversky, A. (1983). Affect, Generalization, and the Perception of Risk. *Journal of Personality and Social Psychology*, 45(1), 20-31.

Jones, B. D. (1994). *Reconceiving Decision-making in Democratic Politics: Attention, Choice, and Public Policy*. Chicago: University of Chicago Press.

Jones, B. D. (2001). *Politics and the Architecture of Choice*. Chicago: University of Chicago Press.

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. (2013). Bounded Rationality and Public Policy Decision-Making. In Howlett, M., Ramesh, M. & Wu, X. (Eds.), *Routledge Handbook of Public Policy* (pp. 273-286). London: Routledge.

Jones, B. D., Thomas, III H. F. & Wolfe, M. (2014). Policy Bubbles. *Policy Studies Journal*, 42(1), 146-171.

Jones, B. D. & Wolfe, M. (2010). Public Policy and the Mass Media. In Koch-Baumgarten, S. & Voltmer, K. (Eds.), *Public Policy and Mass Media: The Interplay of Mass Communication and Political Decision Making* (pp. 17-43). London: Routledge.

Kahneman, D. (2011). *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.

Kahneman, D. & Frederick, S. (2002). Representativeness Revisited: Attribute Substitution in Intuitive Judgment. In Gilovic, T., Griffin, D. & Kahneman, D. (Eds.), *Heuristics and Biases: The Psychology of Intuitive Judgment* (pp. 49-81). New York: Cambridge University Press.

Kingdon, J. W. (1995). *Agendas, Alternatives and Public Policies*. 2nd ed. New York: Harper Collins.

Koger, S. M. & Winder, D. D. (2010). *The Psychology of Environmental Problems*. 3rd ed. New York, NY: Psychology Press.

Kuhn, T. (1977). *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press.

Lang, P. J. (1995). The Emotion Probe: Studies of Motivation and Attention. *American Psychologist*, 50, 372-385.

Langer, E. J. (1975). The Illusion of Control. *Journal of Personality and Social Psychology*, 32, 311-328.

Lazarus, R. S. (1991). *Emotion and Adaptation*. New York: Oxford University Press.

LeDoux, J. (1996). *The Emotional Brain*. New York: Simon & Schuster.

Lichtenstein, S., Fischhoff, B. & Phillips, L. D. (1981). Calibration of Probabilities: The State of the Art to 1980. *DTIC Document*. Eugene, Oregon.

Lodge, M. & Taber, C. S. (2013). *The Rationalizing Voter*. Cambridge: Cambridge University Press.

Loewenstein, G. F., Weber, E. U., Hsee, C. K. & Welch, N. (2001). Risk as Feelings. *Psychological Bulletin*, 127, 267-286.

Lupia, A., McCubbins, M. D. & Popkin, S. L. (2000). Beyond Rationality: Reason and the Study of Politics. In McCubbins, M. D. and Popkin, S. L. (Eds.), *Elements of Reason: Cognition, Choice, and the Bounds of Rationality* (pp. 1-20). Cambridge: Cambridge University Press.

Maor, M. (2012). Policy Overreaction. *Journal of Public Policy,* 32(3), 231-259.

Maor, M. (2014a). Policy Persistence, Risk Estimation and Policy Underreaction. *Policy Sciences*, 47, 425-443.

Maor, M. (2014b). Policy Bubbles: Policy Overreaction and Positive Feedback. *Governance*, 27, 469-487.

Maor, M. & Gross, J. (2015). Emotion Regulation by Emotional Entrepreneurs: Implications for Political Science and International Relations. Paper presented at the 73rd annual MPSA conference, April, Chicago.

Marcus, G. E. (2002). *The Sentimental Citizen: Emotion in Democratic Politics*. New York: Oxford University Press.

Marcus, G. E., Neuman, W. R. & MacKuen, M. (2000). *Affective Intelligence and Political Judgment*. Chicago: University of Chicago Press.

Marcus, G. E., Sullivan, J. L., Theiss-Morse, E. & Wood, S. (1995). *With Malice Toward Some: How People Make Civil Liberties Judgments*. New York: Cambridge University Press.

Martin, L. L. (2001). Mood as Input: A Configural View of Mood Effects. In Martin, L. L. & Clore, G. L. (Eds.), *Theories of Mood and Cognition: A User's Guidebook* (pp. 135-157). New Jersey: Erlbaum.

McCombs, M. (2005). A Look at Agenda Setting: Past, Present and Future. *Journalism Studies*, 6, 543-557.

Minsky, H. P. (1986). *Stabilizing an Unstable Economy*. New Haven, CT: Yale University Press.

Nadeau, R., Niemi R. G. & Amato T. (1995). Emotions, Issue Importance, and Political Learning. *American Journal of Political Science*, 39, 558-574.

Nichols, E. (1989). *Mobilizing Against AIDS*. Cambridge, MA: Harvard University Press.

Niedenthal, P. M., & Brauer, M. (2012). Social Functionality of Human Emotion. *Annual Review of Psychology*, 63, 259–285.

Öhman, A. (2010). Fear and Anxiety: Overlaps and Dissociations. In Lewis, M., Haviland-Jones, J. M., & Feldman-Barrett, L. (Eds.), *Handbook of Emotions* (pp. 709-729). New York: Guilford Press.

Ostrom, E. (2005). *Understanding Institutional Diversity*. Princeton, NJ: Princeton University Press.

Page, B. I. & Shapiro, R. Y. (1983). Effects of Public Opinion on Policy. *American Political Science Review*, 77, 175-90.

Page, B. I. & Shapiro, R. Y. (1992). *The Rational Public: Fifty Years of Trends in American's Policy Preferences*. Chicago: The University of Chicago Press.

Perez, T. L. & Dionisopoulos, G. N. (2014). Presidential Silence, C. Everett Koop, and the Surgeon General's Report on AIDS. *Communication Studies*, DOI: 10.1080/10510979509368436.

Peters, E. (2011). Affect and Emotion. In Fischoff B., Brewer, N. T. & Downs, J. S. (Eds.), *Communicating Risks and Benefits: An Evidence-Based User's Guide* (pp. 89-99). MD: The Food and Drug Administration, US Department of Health and Human Services.

Peterson, G. (2006). Cultural Theory and Emotions. In Stets, J. E. & Turner, J. H. (Eds.), *Handbook of the Sociology of Emotions* (pp. 114-34). New York: Springer.

Pierson, P. (2004). *Politics in time: History, Institutions, and Social Analysis*. Princeton, NJ: Princeton University Press.

Quinn, D. P. & Toyoda, M. (2007). Ideology and Voter Sentiment as Determinants of Financial Globalization. *American Journal of Political Science*, 51, 344-363.

Rick, S. & Loewenstein, G. (2010). The Role of Emotion in Economic Behavior. In Lewis M., Haviland-Jones J. M. and Feldman-Barrett L. (Eds.), *Handbook of Emotions*, 3rd ed. (pp. 138-158). New York: Guilford Press.

Riker, W. (1980). Implications from the Disequilibrium of Majority Rule for the Study of Institutions. *American Political Science Review*, 74, 432-447.

Sabatier, P. A. & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An Assessment. In Sabatier, P. (Ed.), *Theories of the Policy Process* (pp. 117-168). Boulder, CO: Westview Press.

Scharfstein, D. S. & Stein, J. C. (1990). Herd Behavior and Investment. *The American Economic Review*, 80, 465-479.

Scherer, K. R., Schorr, A. & Johnstone, T. (2001). *Appraisal Process in Emotion: Theory, Methods, Research*. New York: Oxford University Press.

Schneider, A. & Ingram, H. (1993). Social Construction of Target Populations: Implications for Politics and Policy. *American Political Science Review*, 87, 334-347.

Schneider, A. L., & Ingram, H. (1997). *Policy Design for Democracy*. Lawrence: University Press of Kansas.

Schneider, A. L., Ingram, H., and de Leon, P. (2014) Democratic Policy Design: Social Construction of Target Populations. In Sabatier, P. A. & Weible, C. M. (Eds.) *Theories of the Policy Process* (pp. 105-150). Boulder, CO: Westview Press.

Schnall, S. Haidt, J., Clore, G. L. & Jordan, A. H. (2008). Disgust as Embodied Moral Judgment. *Personality and Social Psychology Bulletin*, 34, 1096-1109.

Schwartz, N. & Clore, G. L. (1983). Mood, Misattribution, and Judgments of Well-Being: Informative and Directive Functions of Affective States. *Journal of Personality and Social Psychology*, 45, 513-523.

Shiller, R. J. (2000). Measuring Bubble Expectations and Investor Confidence. *The Journal of Psychology and Financial Markets*, 1, 49-60.

Shilts, R. (1988). *And the Band Played On: Politics, People and the AIDS Epidemic*. New York; St. Martin's Press.

Simon, H. A. (1945). *Administrative Behavior*. New York: Macmillan.

Simon, H. A. (1983). *Reason in Human Affairs*. Stanford: Stanford University Press.

Smith, E. R. (1993). Social Identity and Social Emotions: Toward New Conceptualizations of Prejudice. In Mackie, D. M. & Hamilton D. L. (Eds.), *Affect,* *Cognition, and Stereotyping: Interactive Processes in Group Perception*. (pp. 297-315). San Diego, CA: Academic Press.

Smith, N. K., Cacioppo, J. T., Larsen, J. T. & Chatrand, T. L. (2003). May I Have Your Attention, Please: Electrocortical Responses to Positive and Negative Stimuli. *Neuropsychologia*, 41, 171-183.

Smith, E. R., & Mackie, D. M. (2008). Intergroup emotions. In Lewis, M., Haviland-Jones, J. M. & Barrett L. F. (Eds.) *Handbook of emotions* (pp. 428−439). (3rd edn.). New York, NY: Guilford.

Sobran, J. (1986). The Politics of AIDS. *National Review*, 51-2, May 23.

Soroka, S. N. (2002). Issue Attributes and Agenda Setting by Media, the Public, and Policymakers in Canada. *International Journal of Public Opinion Research*, 14, 264-285.

Soroka, S. N. (2014). *Negativity in Democratic Politics: Causes and Consequences.* Cambridge: Cambridge University Press.

Sornette, D. & Cauwels, P. (2014). Financial Bubbles: Mechanisms and Diagnostics. http://arxiv.org/abs/1404.2140 Accessed 17 December 2014.

Stimson, J. A. (1999). *Public Opinion in America: Moods, Cycles, and Swings*, 2nd ed. Boulder, CO: Westview Press.

Stone, D. (2011). *Policy Paradox: The Art of Political Decision Making*. New York: Norton.

Taylor, S. E. (1991). The Asymmetrical Impact of Positive and Negative Events: The Mobilization-minimization Hypothesis. *Psychological Bulletin*, 110, 67-85.

Temoshok, L., Sweet, D. M. & Zich, J. (1986). A Cross-Cultural Analysis of Reaction to the AIDS Epidemic. Paper presented at the meetings of the Society for Behavioral Medicine, March.

Thomas, E. (1985). The New Untouchable: Anxiety over Aids is Verging on Hysteria in Some Parts of the Country. *Times*, 9.23.1985.

Tversky, A. & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, 185, 1124-1131.

Tversky, A., Slovic, P. & Kahneman, D. (1990). The Causes of Preference Reversal. *The American Economic Review*, 80, 204-217.

Valentino, N. A., Hutchings, V. L., Banks, A. J. & Davis, A. K (2008). Is a Worried Citizen a Good Citizen? Emotions, Political Information Seeking, and Learning via the Internet. *Political Psychology*, 29, 247-273.

Weaver, R. K. (1986). The Politics of Blame Avoidance. *Journal of Public Policy*, 6, 371-398.

Wells, J. D., Hobfoll, S. E. & Lavin, J. (1999). When It Rains, It Pours: The Greater Impact of Resource Loss Compared to Gain on Psychological Distress. *Personality and Social Psychology Bulletin*, 25, 1172-1182.

Wlezien, C. (1995). The Public as Thermostat: Dynamics of Preferences for Spending. *American Journal of Political Science*, 39, 981–1000.

Ybarra, O. & Stephan, W. G. (1996). Misanthropic Person Memory. *Journal of Personality and Social Psychology*, 70, 691-700.

Zadra, J. R. & Clore, G. L. (2011). Emotion and Perception: The Role of Affective Information. *Wiley Interdisciplinary Review: Cognitive Science*, 2, 676-685.

Zajonc, R. B. (1980). Feeling and Thinking: Preferences Need No Inference. *American Psychologist*, 35, 151-175.

Zajonc, R. B. (1984). The Interaction of Affect and Cognition. In Scherer, K. R. & Ekman, P. (Eds.), *Approaches to Emotion* (pp. 239-246). Hillsdale, NJ: Erlbaum.