

**University of Sydney, Australia**

---

**From the Selected Works of Donnel A Briley**

---

2012

# Factors Affecting Judgments of Prevalence and Representation: Implications for Public Policy and Marketing

Donnel A Briley, *University of Sydney*

L. J. Shrum, *University of Texas at San Antonio*

Robert S. Wyer, Jr., *Chinese University of Hong Kong*



Available at: <https://works.bepress.com/briley/16/>

In press, *Journal of Public Policy and Marketing*

**Factors Affecting Judgments of Prevalence and Representation:  
Implications for Public Policy and Marketing**

Donnel A. Briley

University of Sydney

L. J. Shrum

University of Texas at San Antonio

Robert S. Wyer, Jr.

Chinese University of Hong Kong

Donnel A. Briley is professor of marketing at the University of Sydney Business School, University of Sydney, NSW 2006, Australia; e-mail: [donnel.briley@sydney.edu.au](mailto:donnel.briley@sydney.edu.au), phone: +61 2 9036 6449. L. J. Shrum is professor of marketing at University of Texas at San Antonio, One UTSA Blvd., San Antonio, TX 78249; e-mail: [lj.shrum@utsa.edu](mailto:lj.shrum@utsa.edu). Robert S. Wyer, Jr. is professor of marketing at the Chinese University of Hong Kong, Shatin, N.T., Hong Kong (SAR); e-mail: [mkwyer@ust.hk](mailto:mkwyer@ust.hk).

This research was supported by a grant from the University of Sydney Business School.

**Factors Affecting Judgments of Prevalence and Representation:  
Implications for Public Policy and Marketing**

**Abstract**

Public policies are typically established to eliminate important social problems (e.g., minority discrimination, crime, poverty). And the importance of these problems, and urgency people feel about addressing them, is influenced by perceptions of their prevalence. These perceptions, however, can be unwittingly biased by extraneous sources of information that lead some either to overestimate or underestimate the seriousness of the problem at hand. We review empirical work on the construction of perceptions of frequency and representativeness and the processes that underlie them, and show that these perceptions are often biased in ways that differ over segments of the population. The implications of these findings for developing public policy initiatives and de-biasing strategies are discussed.

Keywords: minorities, frequency estimation, advertising models, television, public policy, media issues

Legislators and other policy-makers normally attempt to identify and solve problems of concern to their constituents. But what issues are deemed of sufficient importance to deserve attention? For example, how necessary is it to adopt legislation that ensures equal (proportional) representation of minorities in the media and elsewhere? How important a problem is homelessness or violent crime?

One of the more obvious determinants of a problem's importance is, of course, the frequency of its occurrence. The greater the percentage of Americans who are homeless or victims of violent crimes, the more serious the problem is perceived to be. Although the incidence of such problems can sometimes be inferred from objective data, the general public may often rely on their own personal experiences and knowledge. The media provide an important source of this type of information, as television is many people's primary source of knowledge about the world in which they live (Kubey and Csikszentmihalyi 1990). However, its influence is not restricted to newscasts, documentaries and talk shows. Rather, its effect can also be traced to the content of television programs that do not purport to reflect reality at all (e.g., dramas, soap operas, movies, and situation comedies; see Russell, Schau, and Crockett 2013, this issue; Shrum, Burroughs, and Rindfleisch 2005; Shrum and Lee 2012).

Reliance on the media, however, can sometimes produce systematic biases in judgments, and these biases can contribute to the opinions that different segments of the population express concerning the importance of various social policies. Although these disagreements can often be traced to self-serving motives and values differences, they can also reflect differences in perceptions of the incidence of the situations to which the social policies are relevant. Left unchecked, these systematic biases can influence public opinion, which in turn can influence

public policy.

In this article, we address the issue of biased judgments and their implications for public policy. In the first portion of the article, we discuss the nature of these differences in perceptions and explain how they arise. We assume that differences in perceptions of frequency result from differences in (a) the processing of judgment-relevant information at the time the information is first encountered, (b) the retrieval of the information at the time of judgment, and (c) the way in which the retrieved information is actually used to compute an estimate. In the second portion of the article, we review evidence in support of these assumptions and consider their implications for public policy.

### **How Frequency Judgments Are Constructed**

To understand the determinants of frequency estimates, it is necessary to distinguish between two processes that people might use to arrive at these estimates. First, an *on-line* (stimulus-based) process involves keeping a running tally of how often a type of event or situation occurs, and updating the tally each time a new instance is encountered. For example, one might determine the representation of minorities in the media by simply counting the number of minority actors one observes over some period, or estimate of the extent of poverty in a community by counting the indicators of poverty (e.g., abandoned homes) relative to the indicators of affluence (e.g., luxury homes). However, such a strategy is difficult to apply, is only likely when one has an a priori motivation to estimate these occurrences, and is inaccurate when a large number of experiences are encountered over a long period of time (Wyer and Srull 1989).

A second, *memory-based* process may be more common—though systemic biases are inherent. In particular, when people are called upon to estimate the frequency of an event's occurrence, they may base their estimate on the ease with which they can recall instances of the event in question, implicitly assuming that because things that occur frequently are normally easy to recall, then things that are easy to recall are likely to have occurred frequently. (For a discussion of other inferences based on the tendency to treat conditionals as biconditionals, see Wyer 2004; Wyer and Srull 1989.) This possibility, which was first suggested by Tversky and Kahneman (1973), has been elaborated in an extensive program of research by Norbert Schwarz and his colleagues (Cho and Schwarz 2010; Schwarz 2004).

These findings have clear implications for frequency and representation judgments. If examples of the various constructs (e.g., poverty, crime, Black models or actors) are difficult to recall, the estimates of their occurrence are likely to be relatively low. Alternatively, if examples are quite easy to generate from memory, frequency estimates of their incidence are likely to be relatively high. Moreover, factors that affect whether information is easy or difficult to recall become particularly important in understanding the causes of such biased judgments. Next, we discuss two particular factors that affect whether information is easy or difficult to recall, with a focus on those related to television usage.

The first factor affecting ease of recall is frequency of exposure. The more often an event has been encountered, the more representations of the event are likely to be formed and stored in memory and, therefore, the more likely it is that instances of the event can later be recalled. Although this observation is almost self-evident, two additional considerations are less obvious. First, as discussed previously, frequency estimates are often not determined by the actual number

of instances recalled per se, but by the ease of recalling these instances. That is, frequency estimates increase with the number of instances previously experienced because the recall of any given number of instances is subjectively easier when the number available is large—not because a greater number of these instances are actually recalled at the time the estimate is made. Second, people often recall information they have received independently of its source (for a review, see Kumkale and Albarracin 2004). Therefore, the frequency with which people have been exposed to particular events—whether those events were real or depicted on television—can influence their perceptions of how often those events occur. In the policy domain, if violent crimes occur disproportionately often in television dramas, then people who watch television frequently may easily recall these instances out of context and inadvertently use them as a basis for estimating the incidence of crime in the real world. Consequently, they may give stronger support than is justified to harsh anti-crime policies.

The second factor affecting ease of recall is depth of processing. People are better able to remember an experience they have had if they think more extensively about it at the time the experience occurs ( Craik and Lockhart 1972). Thus, the experience is likely to come to mind more quickly when they make a judgment to which that experience is potentially relevant. The thought that people devote to an experience depends on numerous factors, including its novelty (Wyer and Hartwick 1980), distinctiveness (McGuire and McGuire 1981), and inconsistency with expectations (Srull and Wyer 1989). Events that are relatively novel, distinctive, or inconsistent with expectations are likely to come to mind quickly and easily, and consequently their incidence may be overestimated (Hamilton and Gifford 1976; Sanbonmatsu, Shavitt, and Gibson 1994). These qualities of event novelty, vividness, and unexpectedness are also part and parcel of

television portrayals. Thus, exposure to such events through media portrayals can influence judgments of real-world incidence independent of frequency of exposure.

Table 1 summarizes the conditions under which on-line and memory-based processes are likely to be used, and the nature of the two processes.

-----

Table 1 about here

-----

### **Empirical Evidence**

As we indicated in the previous section, particular factors can influence estimates of the incidence of a social event through their mediating impact on the ease with which specific instances of the event come to mind. Most of the research bearing on this influence has been performed in areas of little relevance to social policy. However, two bodies of research bear more directly on policy-related questions. The first concerns the effect of television viewing on perceptions of social reality. The second, which focuses on the perceptions of the incidence of minority members in advertisements, provides evidence of the distinction between on-line and memory-based processes of the sort we noted earlier in this article.

### **Television Consumption and Accessibility**

Television viewing, whether it is of ads or the programs between the ads, can influence the accessibility (ease of recall) of information in memory. First, its accessibility can increase with the

frequency of exposure to the information. This frequency, in turn, should be a joint function of (a) the amount of television that people watch, and (b) the frequency with which construct-relevant instances are portrayed. In the latter regard, content analyses of television programs indicate that certain constructs are portrayed proportionately more often than they occur in the real world. Violence, for example, is much more prevalent on television than in the real world (Wilson et al. 1998). Professionals such as doctors, lawyers, and wealthy businessmen are greatly overrepresented, as are markers of affluence (e.g., swimming pools, servants, mansions), but blue collar and lower status occupations are underrepresented (Lichter, Lichter, and Rothman 1994; O'Guinn and Shrum 1997; Shrum et al. 2011).

If these differences exist, they should influence the relative accessibility of television-based instances in memory among persons who watch television. Furthermore, if people's judgments are later based on the ease of retrieving instances from memory independently of their original context, these differences should be reflected in inferences about the frequency of the instances' occurrence in the real world. Shrum and his colleagues have provided support for this proposition. In a series of studies, they demonstrated that the frequently observed positive relation between amount of television viewing and beliefs about the incidence of such constructs as crime, marital discord, and affluence is mediated by the accessibility of those constructs in memory: Television viewing increases the accessibility of the constructs, which in turn increases the estimates of real-world instances (for reviews see Shrum 2009; Shrum and Lee 2012).

### **Individual Differences in Frequency Estimation**

The effects of television viewing identified by Shrum and his colleagues were largely the

result of memory-based processing. As we noted earlier, people may sometimes make frequency estimates using on-line processing, as judgment-relevant instances are experienced. This is particularly true if individuals have an a priori goal to which the estimates are relevant. Briley, Shrum, and Wyer (2007) obtained indirect support for this possibility in a study of people's responses to advertisements. Both European Americans and African Americans viewed a series of clothing advertisements that showed several Black and White models, and the number of Black models presented was varied across conditions. Participants later estimated the number of Black models they had seen and took a recognition memory test of the models. Because European-American participants would likely have little reason to be concerned about the representation of Black and White models in the ads, we expected they would be unlikely to think about their relative frequency at the time the ads were presented. In contrast, African-American participants may be particularly concerned with their own ethnic group's representation in ads, and thus might have an a priori interest in understanding Black versus White representation in the ads they saw, which would make them more likely to engage in on-line processing. If so, they should keep a running tally of the frequency of occurrence of these models as the models were encountered and, therefore, be fairly accurate in reporting this frequency when the number presented was small and easy to count.

The results supported these conjectures. European Americans showed higher recognition of Black models than African Americans did, confirming the assumption that the European-American participants paid disproportionate attention to these more distinctive models. Consequently, they overestimated the incidence of Black models in the ads they saw by 50%, and this overestimation was greater when the number of models presented was small (thus making the models particularly

distinctive). In contrast, African-American participants estimated the frequency of the Black models quite accurately when a small number of these models had been presented, but underestimated their frequency when the actual number of the models they encountered was high.

### **Implications**

The studies just reviewed demonstrate that people's perceptions of the incidence of socially relevant events can be driven as much by their own observations—of both real and non-real events—as by “hard data.” It seems likely that the incidence of many other events that society wishes to minimize (e.g., violent crime, homelessness) or to encourage (e.g., minority college graduates, women executives) is affected similarly. People are sometimes skeptical of statistical information that bears on politically sensitive areas, believing that the sources of the information provide data that advance their own political interests (Mosher, Miethe, and Phillips 2002). This sort of skepticism, added to people's general tendency to rely on information and arguments they have generated themselves rather than those presented by others (Petty and Cacioppo 1979), typically make personal experiences and recollections the primary determinant of the frequency judgments of social importance.

People's views on policy issues related to these events being judged are no doubt affected by certain facts or personal preferences regarding the policy area of interest, such as the objective severity of the problem at a given time (e.g., murder rate), or one's own expectation as to what levels are tolerable or appropriate. However, the research we have reviewed suggests occasions when the underlying judgments regarding the severity of a policy-relevant problem are likely to be

faulty, resulting in policy views that are misguided.

### **Over-representation in the Media: Crime Example**

We have suggested that the media has a significant influence on individuals' development of belief systems that do not reflect reality. Although the frequency of observing a particular type of event affects perceptions of its incidence, the frequency with which the news media mentions and revisits such events can have similar effects. These effects may be an inevitable byproduct of the attempt of the news to report events that are in fact newsworthy, and thus are novel and distinctive. The focus of attention on such events, however, increases the likelihood that they are later retrieved and used as a basis for estimating the likelihood of the event's occurrence, leading to overestimates for reasons noted earlier. At the same time, instances of more common phenomena (e.g., homeless persons, miserable living conditions of welfare mothers) are not considered newsworthy. As a result, they appear infrequently and their incidence is consequently underestimated.

Statistical evidence supports these contentions. For example, despite the fact that the chance of being killed at school is less than one in two million, 71% of respondents to an NBC/*Wall Street Journal* poll felt a school shooting was likely to occur in their community (American Institutes for Research 2012). And at a time when youth crime had reached a 25-year low, 62% of respondents in the National Crime Victimization Survey that year believed it was increasing (U.S. Department of Justice 1999). According to a meta-analysis of 77 studies of newspaper and television news content, society's unrealistic fear of crime arises because the frequency of reporting violent crimes is grossly out of proportion to their actual occurrence (Dorfman 2007).

Furthermore, ethnicity-related biases in reporting exacerbate negative perceptions of Blacks and Hispanics. News media often over-represent minorities as perpetrators of crimes (Gilliam and Iyengar 2000, 2005) and are more likely to identify the race of suspects if they are Black than if they are not (DeLouth and Woods 1996). Thus, reporting biases are likely to encourage the public not only to overestimate the incidence of crime, but also to assign undue blame to minority groups. Overestimates of minorities' engagement in criminal behavior could explain systemic biases in our justice system, such as the tendency for judges and juries to give harsh sentences—including the death penalty (Eberhardt et al. 2006)—to individuals with typically Black (vs. White) features (Blair, Judd, and Chapleau 2004).

Research also indicates, however, that the frequency with which one observes fictitious occurrences of an event also influence frequency perceptions (Shrum 2007). Heavy television viewers are likely to have a distorted view of the world, believing in a reality that is similar to the one that Hollywood directors have constructed in the studio—and their policy stances generally line up with this distorted perspective (Gerbner et al. 1978). People who watch a lot of television believe that crime and violence are worse than people who watch less (Shrum 1996; Shrum and Lee 2012). Thus, heavy viewers may be more likely to fear being a crime victim, to take steps to protect against criminals (e.g., buying a handgun or alarm system), and to support aggressive government actions against crime (e.g., “three strikes” laws, hiring of additional police), regardless of whether viewers are themselves residents of high-crime areas or not.

### **Individual Differences: Minority Representation Example**

Briley et al.'s (2007) findings show that the processes by which majority group members

construct their judgments can lead to the perception that the representation of minorities is greater than it actually is. In contrast, the process that minority group members employ can lead them to perceive that minorities are less well represented than they actually are. The processes we identified could account for cross-group differences in the support of affirmative action policies. For example, these processes could lead majority group members to infer that existing policies to recruit minority group members are effective when they are not, while leading minority group members to perceive that policies are not working when they are. The possibility that ethnic differences in support for equal representation initiatives derive at least in part from cognitive biases rather than animosity or self-serving motives is perhaps encouraging (for a review, see Sanbonmatsu, Shavitt, and Gibson 1994).

Our analysis is particularly relevant to American higher education, where affirmative action programs that achieve equal representation goals have been criticized and challenged in the courts (cf. 2012 Supreme Court hearing regarding University of Texas at Austin's undergraduate admissions). These challenges have resulted in the weakening or restructuring of affirmative action policies at state colleges in Texas in 1997, California and Washington in 1998, and Michigan and Florida in 2000. For example, the ban on considering race in admissions at the University of California, Berkley initially caused a 61% drop in admissions of Black, Hispanic, and Native American students (Americans for a Fair Chance 2003), pushing minority groups far below proportional representation levels. The lack of public support for these programs might result in part from perceptions by majority members that the representation of minority members in colleges and universities is greater than it actually is—perhaps due to seemingly innocuous media patterns (e.g., frequent telecasts showing Black athletes participating in college sports).

### **Under-representation in the Media: Incidence of Hunger Example**

Despite the immense wealth and power of America, 6.7 million households suffer from hunger (Coleman-Jensen 2011). The 2008 financial crisis is responsible for having increased this number, and for pushing U.S. poverty figures to a 52-year high (DeNavas-Walt 2011). One might expect this important issue to receive continued and focused attention from the media, given its power to educate and shape public opinion (Kinder 1998). However, the media have not taken up this mission in earnest and may have contributed to the public's failure to view this problem as urgent and important. A number of factors contribute to this failure, including media's tendency to present the interests of the well-off as general concerns (e.g., stock portfolio performance) and downplay economic concerns of the poor (Manstios 1995). For example, during good economic times the news media often laud a booming economy and present a vision of widespread prosperity. This message is bolstered by fictional programs that emphasize wealth and success (O'Guinn and Shrum 1997).

But also, and of direct relevance to our discussion, the poor and their problems are not well represented in most media channels (Bullock, Wyche and Williams, 2001). In a review of studies examining the frequency of newscasts and programs focusing on hunger and other poverty issues, Bullock et al. (2001) concluded that the coverage of these issues has been "disproportionately low given the scope of the problem" (p. 232). The under-representation of hunger and related issues in television programming may have a role in American society's failure to adequately address this issue. Evidence that this could be the case, and that the hunger situation might be helped by improving coverage, comes from a study by Gandy and Baron (1998). They show that after

exposure to in-depth media stories discussing problems faced by poor Blacks, White viewers became less likely to blame these individuals for their economic hardships.

### **Identifying Those with Biases**

It might be possible to identify environments in which perceptions of representativeness are particularly inaccurate, so that policy makers can understand which locales are likely to have people working from poor assumptions. For example, our analysis suggests overestimation should be strongest in situations in which minority group members are particularly salient. Several helpful implications derive from this observation. First, individuals who run across very few members of the target minority group might be more likely to find these individuals to be distinctive and, therefore, to overestimate their incidence. For example, residents of Salt Lake City, Utah, a city that is less than 2% Black, could be more susceptible to making overestimates than residents of Norfolk, Virginia, a city that is 32% Black (U.S. Bureau of the Census 2010).

The extent to which a city's neighborhoods are racially integrated is likely to be important as well. Majority members who rarely run across members of the target minority, or who encounter them only in unique situations, are more likely to find these members attention-getting. If indeed a city's racial integration levels are predictive of its residents' tendencies to overestimate minority frequencies, then figures reflecting city segregation can be useful to policy makers for targeting de-biasing efforts. For example, Chicago and Detroit, two of the most segregated cities according to the "isolation index" used by the U.S. Census Bureau, may need more attention from policy makers than San Jose and Portland, two of the least segregated (U.S. Bureau of the Census 2010).

### **Possible De-biasing Strategies**

The biases just described are quite predictable. This is largely because the underlying processes that produce them are fairly well understood. Thus, we can predict the pattern of judgments if we know the nature of the situation and the nature of the person: How much news and television to which she is exposed, the ethnic composition of the neighborhood in which she lives, and so forth. Perhaps most important for this discussion, however, is the implication of prediction as a function of situation: We should also be able to alter aspects of the situation or person such that the biases are reduced. How might this occur? For one thing, we need to make sure that people have sufficient access to objective data and, perhaps more importantly, are receptive to it. We know from decades of research on the weighting of information in judgments that people often do not weight statistical information as heavily as they weight anecdotal information, which is more vivid (Nisbett and Ross 1980). In addition, people generally weight information gained through personal experience more heavily than information gained through indirect experience in attitude construction and decision-making (Fazio and Zanna 1981). Thus, the mere presentation of such information is likely to be insufficient.

To surmount high hurdles of believability, and reduce inevitable distrust and counterarguing, information may need to come from or be endorsed by a credible, trusted source. In addition, the source should not be perceived to have an “agenda” regarding the issue at hand, given that people are generally aware that statistical information (or any information, for that matter) can be selectively presented. People may be skeptical of information regarding home break-ins that comes from the National Rifle Association, or regarding minority college attendees

that comes from the United Negro College Fund, because they suspect these organizations might engage in such selective presentation. It could be that government sources are viewed as the most unbiased for some domains. Given that different people value different sources, it would be useful to get endorsements from multiple agencies. These sorts of steps might be particularly necessary to overcome skepticism when beliefs run counter to perceptions generated from direct experience.

The attributes of decision biases that make them predictable also suggest de-biasing techniques. That is, if we can make people aware of why their perceptions may not be accurate in a particular situation, we may be able to help them correct for that bias. This avenue is admittedly more difficult to implement operationally and theoretically. And even if such arguments are possible, it is often difficult to correct completely for judgmental biases no matter how persuasive the arguments (for a review, see Sherman and Corty 1984).

## **Conclusion**

In the present article, we have reviewed the research on the processes underlying the formation of perceptions of frequency and representation to show how these perceptions may be biased in predictable ways. Because these perceptions are natural and often unquestioned, they can present a challenge to policy makers who wish to improve the accuracy of their constituents' judgments. Our analysis covers the role of media representations—both advertisements and the programs between the ads—on the formation of biased perceptions, and offers policy implications of these biases. In today's media-rich environment, media representations often overwhelm direct experience for particular situations and groups of people (see Russell et al. 2013, this issue). In

fact, media representations are often the sole source of information about people and worlds distant from our own. Yet, as McLeod and Chaffee (1972) note, “our ideas seem to be peculiarly our own . . . [and] it is hard for us to realize how little of our information comes from direct experience and how much of it comes only indirectly, from other people and the mass media” (p. 50).

## References

Americans for a Fair Chance (2003), "The History of Affirmative Action Policies," *In Motion Magazine*, August, Washington, DC.

American Institutes for Research (2012), Center for Collaboration and Practice, webpage: [http://cecp.air.org/juvenile\\_justice\\_highlight.asp](http://cecp.air.org/juvenile_justice_highlight.asp), accessed 24 March 2012.

Blair, Irene V., Charles M. Judd, and Kristine M. Chapleau (2004), "The Influence of Afrocentric Facial Features in Criminal Sentencing," *Psychological Science*, 15 (10), 674-679.

Briley, Donnel A., L. J. Shrum, and Robert S. Wyer (2007), "Subjective Impressions of Minority Model Frequencies in the Media: A Comparison of Majority and Minority Viewers' Judgments and Underlying Processes," *Journal of Consumer Psychology*, 17 (1), 36-48.

Bullock, Heather, Karen Fraser Wyche, and Wendy Williams (2001), "Media Images of the Poor," *Journal of Social Issues*, 57 (2), 229-246. doi: 10.1111/0022-4537.00210

Busselle, Rick W. and L. J. Shrum (2003), "Media Exposure and the Accessibility of Social Information," *Media Psychology*, 5 (3), 255-282.

Cho, Hyejeung and Norbert Schwarz (2010), "I Like Those Glasses on You, but Not in the Mirror: Fluency, Preference, and Virtual Mirrors," *Journal of Consumer Psychology*, 20 (4), 471-475.

Coleman-Jensen, Alisha, Mark Nord, Margaret Andrews, and Steven Carlson (2011), *Household Food Security in the United States in 2010 (ERR-125)*, U.S. Dept. of Agriculture, Econ. Res. Serv. (September).

Craik, Fergus I. M. and Robert S. Lockhart (1972), "Levels of Processing: A Framework for Memory Research," *Journal of Verbal Learning & Verbal Behavior*, 11 (6), 671-84.

DeLouth, Tara-Nicholle Beasley, and Cindy J. P. Woods (1996), "Biases Against Minorities in Newspaper Reports of Crime," *Psychological Reports*, 79 (2), 545-546.

DeNavas-Walt, Carmen, Bernadette D. Proctor, and Jessica C. Smith (2011), *Income, Poverty, and Health Insurance Coverage in the United States: 2010*, U.S. Census Bureau, Current Population Reports, Washington, DC: U.S. Government Printing Office.

Dorfman, Lori (2007), "Using Media to Influence Policy," in L. Cohen, V. Chavez, and S. Chehimi," *Prevention is Primary: Strategies for Community Well Being*, San Francisco: Jossey-Bass.

Eberhardt, Jennifer L., Paul G. Davies, Valerie J. Purdie-Vaughns, and Sheri L. Johnson (2006), "Looking Deathworthy: Perceived Stereotypicality of Black Defendants Predicts Capital-sentencing Outcomes," *Psychological Science*, 17 (5), 383-386.

Fazio, Russell H. and Mark P. Zanna (1981), "Direct Experience and Attitude-Behavior Consistency," in *Advances in Experimental Social Psychology*, Vol. 14, Leonard Berkowitz, ed. New York: Academic Press, 161-202.

Gandy, Oscar and Jonathan Baron (1998), "Inequality: It's All in the Way You Look at It," *Communication Research*, 25 (5), 505-527.

Gerbner, George, Larry Gross, Marilyn Jackon-Beeck, Suzanne Jeffries-Fox, and Nancy Signorielli (1978), "Cultural Indicators: Violence Profile No. 9," *Journal of Communication*, 28 (Summer), 176-207.

Gilliam, Franklin D. and Shanto Iyengar (2005), "Super-Predators or Victims of Societal Neglect? Framing Effects in Juvenile Crime Coverage," in *Framing of American Politics*, Karen Callaghan and Frauke Schnell, eds. Pittsburgh: University of Pittsburgh Press, 148-166.

Gilliam, Franklin D. and Shanto Iyengar (2000), "Prime Suspects: The Influence of Local Television News on the Viewing Public," *American Journal of Political Science*, 44 (3), 560-573.

- Hamilton, David L. and Robert K. Gifford (1976), "Illusory Correlation in Interpersonal Perception: A Cognitive Basis of Stereotypic Judgments," *Journal of Experimental Social Psychology*, 12 (October), 392-407.
- Higgins, E. Tory (1996), "Knowledge Activation: Accessibility, Applicability, and Salience, in *Social Psychology: Handbook of Basic Principles*, E. Tory Higgins and Arie W. Kruglanski, eds. New York: Guilford Press, 133-168.
- Kinder, Donald (1998), "Attitude and Action in the Realm of Politics," In *Handbook of Social Psychology*, 4<sup>th</sup> edition, D. Gilbert, S. Fiske, and G. Lindzey, eds. Boston: McGraw-Hill , 778-867.
- Kubey, Robert and Mihaly Csikszentmihalyi (1990), *Television and the Quality of Life: How Viewing Shapes Everyday Experience*, Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kumkale, G. Tarcan and Dolores Albarracin (2004), "The Sleeper Effect in Persuasion: A Meta-Analytic Review," *Psychological Bulletin*, 130 (1), 143-172.
- Lichter, Robert S., Linda S. Lichter, and Stanley Rothman (1994), *Prime Time: How TV Portrays American Culture*, Washington, DC: Regnery.

Mantsios, Gregory (1995), "Making Magic: Making Class Invisible," in *Race, Class and Gender in the United States: An Integrated Study*, P. S. Rothenburg, ed. New York: St. Martin's, 131-143.

McGuire, William J. and Claire V. McGuire (1981), "The Spontaneous Self-Concept as Affected by Personal Distinctiveness, in *The Self-Concept*, Mervin D. Lynch, Adryth A. Norem-Hebeisen, and Kenneth J. Gergen, eds. New York: Ballinger, 147-171.

McLeod, Jack M. and Steven R. Chaffee (1972), "The Construction of Social Reality," in *The Social Influence Process*, J. T. Tedeschi, ed. Chicago: Aldine Atherton, 50-99.

Mosher, Clayton J., Terance D. Miethe, and Dretha M. Phillips (2002), *The Mismeasure of Crime*, Thousand Oaks, CA: Sage.

Nisbett, Richard E. and Lee Ross (1980). *Human Inference: Strategies and Shortcomings of Social Judgment*, Englewood Cliffs, NJ: Prentice-Hall.

O'Guinn, Thomas C. and L. J. Shrum (1997), "The Role of Television in the Construction of Consumer Reality," *Journal of Consumer Research*, 23 (March), 278-294.

Petty, Richard E. and John T. Cacioppo (1979), "Issue Involvement can Increase or Decrease Persuasion by Enhancing Message-relevant Cognitive Response," *Journal of Personality and*

*Social Psychology*, 37 (December), 1915-1926.

Russell, Cristel A., Hope J. Schau, and David Crockett (2013), "Cultural Diversity in Television Narratives: Homophilization, Appropriation and Implications for Media Advocacy," *Journal of Public Policy and Marketing*, 32 (Spring).

Sanbonmatsu, David M., Sharon Shavitt, and Bryan D. Gibson (1994), "Salience, Set Size, and Illusory Correlation: Making Moderate Assumptions about Extreme Targets," *Journal of Personality and Social Psychology*, 66 (6), 1020-1033.

Schwarz, Norbert (2004), "Metacognitive Experiences in Judgment and Decision Making," *Journal of Consumer Psychology*, 14 (4), 332-348.

Schwarz, Norbert, Herbert Bless, Fritz Strack, Giesela Klumpp, Helga Rittenauer-Schatka, and Annette Simons (1991), "Ease of Retrieval as Information: Another Look at the Availability Heuristic," *Journal of Personality and Social Psychology*, 61 (2), 195-202.

Sherman, Steven J. and Eric Corty (1984), "Cognitive Heuristics," in *Handbook of Social Cognition*, Vol. 1, Robert S. Wyer and Thomas K. Srull, eds. Hillsdale, NJ: Lawrence Erlbaum Associates, 189-286.

Shrum, L. J. (1996), "Psychological Processes Underlying Cultivation Effects: Further Tests of Construct Accessibility," *Human Communication Research*, 22 (4), 482-509.

Shrum, L. J. (2009), "Television Viewing and Social Reality: Effects and Underlying Processes," in *Social Psychology of Consumer Behavior*, ed. Michaela Wänke, New York: Psychology Press, 251-272.

Shrum, L. J., James E. Burroughs, and Aric Rindfleisch (2005), "Television's Cultivation of Material Values," *Journal of Consumer Research*, 32 (December), 473-479.

Shrum, L. J., Jaehoon Lee, James E. Burroughs, and Aric Rindfleisch (2011), "An On-line Process Model of Second-Order Cultivation Effects: How Television Cultivates Material Values and Its Consequences for Life Satisfaction," *Human Communication Research*, 37 (1), 34-57.

Shrum, L. J. and Jaehoon Lee (2012), "Television's Persuasive Narratives: How Television Influences Values, Attitudes, and Beliefs," in *The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion*, 2nd edition, L. J. Shrum, ed. New York: Taylor and Francis, 147-167.

Strull, Thomas K. and Robert S. Wyer (1989), "Person Memory and Judgment," *Psychological Review*, 96 (1), 58-63.

Tversky, Amos and Daniel Kahneman (1973), "Availability: A Heuristic for Judging Frequency and Probability," *Cognitive Psychology*, 5 (2), 207-232.

U.S. Bureau of the Census (2010), *Statistical Abstracts of the United States*, Washington, DC: Government Printing Office.

U.S. Department of Justice (1999), *National Crime Victimization Survey*,  
<http://www.ojp.usdoj.gov/bjs/>.

Wilson, Barbara J., David Kunkel, Daniel Linz, William J. Potter, Edward Donnerstein, and Stacy L. Smith (1998), "Violence in Television Programming Overall: University of California, Santa Barbara Study," in *National Television Violence Study*, Vol. 2, Thousand Oaks: Sage, 3-204.

Wyer, Robert S. (2004), *Social Comprehension and Judgment: The Role of Situation Models, Narratives, and Implicit Theories*, New York: Lawrence Erlbaum Associates.

Wyer, Robert S. (2008), "The Role of Knowledge Accessibility in Cognition and Behavior: Implications for Consumer Information Processing," in *Handbook of Consumer Research*, Curt Haugtvedt, Frank R. Kardes, and Paul M. Herr, eds. New York: Taylor & Francis Group.

Wyer, Robert S. and Jon Hartwick (1980), "The Role of Information Retrieval and Conditional Inference Processes in Belief Formation and Change," in *Advances in Experimental Social Psychology*, Vol. 13, Leonard Berkowitz, ed. New York: Academic Press, 241-284.

Wyer, Robert S. and T. K. Srull (1989), *Memory and Cognition in its Social Context*, Hillsdale, NJ: Lawrence Erlbaum Associates.

TABLE 1  
PROCESSES FOR POLICY-RELEVANT FREQUENCY ESTIMATION

	<b>Motivation to Track Event Occurrences</b>	<b>Activity at Event Encounter</b>	<b>Activity at Time of Frequency Judgment</b>	<b>Example</b>
<i>On-line Process</i>	High motivation: Strong a priori interest in tracking	Stimulus-based tally is kept as events are encountered	Tally retrieved from memory and used as a basis for the judgment	Members of ethnic minority groups might have an a priori interest in whether they have equal representation in the media, and may base judgments of models from their own group on a running tally updated as exposures occur
<i>Memory-based Process</i>	Low motivation: Little a priori interest in tracking	No tally kept as events are encountered	Memory searched, and ease of retrieving event instances used as an indication of frequency, based on: <ul style="list-style-type: none"> <li>- Frequency of exposure to real and fictional occurrences</li> <li>- Distinctiveness and novelty of the stimulus</li> </ul>	Non-minorities might have less interest in whether minorities have equal representation in the media, and may need to search their memories for instances of these models when a frequency judgment is needed