
THEORETICAL INTEGRATION ESSAY

Exemplification Theory: Judging the Whole by Some of Its Parts

Dolf Zillmann

College of Communication and Information Sciences
University of Alabama

Exemplification is a ubiquitous phenomenon in communication. It permeates informative, educational, and persuasive endeavors in both interpersonal exchanges and media presentations. Despite this, it has received little attention in communication research. Although its empirical exploration has begun and shown considerable promise, especially in the news context, a theoretical foundation has been missing. This essay attempts to remedy the neglect by conceptually scrutinizing the exemplification process. The relationship between exemplification and representation is given special attention, and exemplification strategies are extracted and their merits appraised. Exemplification is examined in different domains of communication, and the interface between direct and mediated experience is surveyed in conceptual terms. It is hoped that the analysis will foster a theoretical integration of the conceptually diverse and often eclectic research on exemplification effects.

A large number of investigations exploring the consequences of aggregating case descriptions in providing accounts of socially relevant situations and events have been published in recent years (cf. Bargh, 1984; Higgins, 1996; Sherman, Judd, & Park, 1989). These investigations have generated findings that have direct implications for the effects of media presentations. In fact, a considerable portion of the reported research has been conducted specifically in the media context. Investigations of the effects of news reports, in particular, have produced a wealth of pertinent findings (cf. Brosius, 1995). It has been demonstrated repeatedly, for instance, that the display of series of cases that are either

Requests for reprints should be sent to Dolf Zillmann, Senior Associate Dean for Graduate Studies and Research, College of Communication and Information Sciences, University of Alabama, Tuscaloosa, Alabama 35487–0172. E-mail: dzillmann@icr.ua.edu

consistent or inconsistent with a news report's focal contention fosters perceptions in accord with the distribution of the cases (Brosius, 1996; Brosius & Bathelt, 1994; Zillmann, Gibson, Sundar, & Perkins, 1996; Zillmann, Perkins, & Sundar, 1992). In forming impressions of reported phenomena, recipients were found to approximate the case-counter case ratio. This effect tended to dominate the influence of so-called baserate information (i.e., the effect of reliable, quantitative information about the distribution of cases) and was observed to persist for days and weeks. The inclusion of qualitatively distorted, atypical cases in news reports proved to be similarly powerful and persistent—the effect manifesting itself even in the presence of incompatible baserate information (Gibson & Zillmann, 1994). The emotionality of exhibited cases emerged as yet another potent factor in creating lasting effects on impressions, beliefs, and associated dispositions (Aust & Zillmann, 1996). The use of emotion-evoking imagery was found to create perceptions and dispositions that, over time, actually gained strength (Zillmann & Gan, 1996).

Taken together, the effects of such case presentations have been interpreted as showing that recipients give disproportional attention to concrete, often vividly displayed events, especially to those that engage the recipients' emotions, and that this attentional preference comes at the expense of attention to more abstract, comparatively pallidly presented information. The assessment of nonsingular phenomena, in turn, is seen as reflecting this perceptual and encoding bias in that it fosters superior information access as judgments are rendered, especially with increased time separation between reception and judgment.

The indicated effects of reports that aggregate case descriptions in efforts to inform about phenomena that extend beyond the considered cases tend to be explained by either one or any combination of three established cognitive mechanisms: priming (Berkowitz & Heimer Rogers, 1986; Srull & Wyer, 1979), the availability heuristic (Kahneman, Slovic, & Tversky, 1982; Tversky & Kahneman, 1973), and the representativeness heuristic (Kahneman et al., 1982; Kahneman & Tversky, 1973). Priming refers to the short-lived influence of recently activated cognitive schemata on social perception under conditions associated with some degree of ambiguity. The availability heuristic is a related construct that is less time-dependent. Rather than emphasizing recency of cognitive activation, it focuses on the accessibility of relevant cognitions in memory. Concepts that readily avail themselves in memory as related judgments, because of frequent activation, unique vivid features, or yet other reasons, come to exert a disproportional influence on judgment. The representativeness heuristic, finally, specifies an additional influence in projecting that judged entities are compared against a sampling of related ones, and that a likelihood transference of traits is made from the sample to the individual case.

The availability heuristic has been refined by extension of the accessibility concept from short-lived contextual priming, which relies on the recency of construct activation, to *chronic accessibility*, which is defined as enduring accessibility that results from the potentially nonrecent frequent and consistent activation of particular constructs (Bargh, 1984; Bargh, Lombardi, & Higgins, 1988; Higgins, Bargh, & Lombardi, 1985). This conceptualization thus addresses the formation of persisting, ecologically more meaningful construct accessibility capable of influencing judgment for extended periods of time in essentially automatic fashion (Bargh, 1984; Bargh, Chaiken, Govender, & Pratto, 1992; Spielman, Pratto, & Bargh, 1988). Supportive research (Bargh et al., 1988; Higgins et al., 1985) suggests, in fact, that the nonimmediate influence on social judgment of chronic accessibility readily overwhelms that of contextual priming, the latter being dominant only immediately after construct activation. The extension appears to be of particular importance to the consideration of media effects, as it is commonly held that these effects are often built on frequent and consistent exposure to largely redundant concepts.

In contrast to the apparent availability of psychological theory that permits the derivation of unambiguous predictions of exemplification effects, the conceptualization of exemplification itself, along with that of exemplification strategies, has remained unarticulated. Inconsistencies in the use of the concept are the result. Conceptual imprecision is evident, for instance, in efforts at correcting the impression that baserate information, in the competition with vivid case descriptions, is almost always inconsequential. In such efforts (e.g., Baesler & Burgoon, 1994; Krupat, Smith, Leach, & Jackson, 1997), the effects of reliable statistical accounts are compared with those of unreliable informal accounts of the events. Not surprisingly, the presentation of relevant, precise information is found to have stronger short-term effects on perception than the presentation of less relevant and less precise information. The effect comparison between statistics on the one hand and contradictory anecdotes on the other (Krupat et al., 1997) shows that numbers matter in some circumstances. It is uninformative, however, as far as the consideration of exemplification strategies is concerned. Exemplification, as we shall see, is essentially independent of the competition with baserate information; and if involved in such competition, it is unlikely to be singular or dominantly contradictory (Daschmann & Brosius, 1997).

The purpose of the following exposition, then, is to eliminate the ambiguities that have plagued case-report theory and research by providing a rigorous conceptualization of exemplification and its strategic uses.

INTUITIVE USES OF EXEMPLIFICATION IN COMMUNICATION

Everybody is familiar with examples. Everybody has been given examples, and everybody has related examples to others, in efforts to elucidate a broader concept or issue. Everybody, therefore, has some tacit understanding of a relationship between an example and a larger entity to be exemplified by it. Implied is that more than one example exists, and that several examples tend to do a better job than just one in explaining aspects and features of the exemplified entity. Also implied is that an utterly unique, singular incident, such as the first moon landing by humans, could only exemplify itself; and hence, that it could not serve as an example of other first moon landings by humans. It may, however, serve as an example of other landings of spacecraft, if the expository focus were on aspects of the event that exhibit a degree of similarity with other events under consideration.

Tacit understanding of exemplification thus entails recognition of shared features between an example (also called *exemplar*) and the exemplified, as well as between all possible examples of the exemplified. In simple terms, such sharing amounts to similarity between exemplars and the exemplified. Lexical definitions focus on this similarity by stipulating that the exemplar be typical or characteristic of exemplified entities. The highest degree of similarity is demanded by definitions that specify the exemplar as a case in point or an instance of the exemplified entities. Both specifications suggest an array of identical entities from which any single one can be taken to exemplify all others. Each and every instance may be singled out to inform about all other instances.

The stipulation that all exemplars be identical may seem overly stringent, but actually is not when one considers that the stipulation need not be applied to all features of an entity. We can speak of New Yorkers as identical entities in that their domicile is New York. They may differ in any other regard. It is important, then, to distinguish a set of features for which interexemplar similarity is required from a set of features that are free to vary. The latter features are immaterial in considering a particular instance an exemplar of other instances subsumed in the exemplified group of instances. As a consequence, exemplars are to be considered instances of whatever kind that are capable of representing other instances only to the extent that they share with them all defining features.

The specification that exemplifying and exemplified instances may be of whatever kind needs elaboration. The features of perceptible entities and events obviously can be represented to percipients. Features of objects such as trees, houses, and bridges can be exemplified. So can dogs, people, and computers,

along with their perceivable actions. The overt “behavior” of entities is, of course, readily subject to exemplification. Less obvious might be the representation of abstractions and concepts that elude direct perceptual control. Extracted relationships between entities, either in the form of covariations or causality, may be exemplified nonetheless. So may the match between intent and performance, or between precept, action choice, the expectation of consequences, and actual consequences. For instance, children who consume a fair amount of fairy tales readily appreciate that elderly women with deformity of the back and screechy voice harbor hostile intentions and, given the opportunity, act on them. These children also appreciate that actions, such as a witch’s efforts to make a meal of Hansel and Grethel, are in violation of moral precepts and call for punishment. Moreover, they are able to spot a match between punitive precepts and punitive actions against a wrongdoer and hence can rejoice when the witch gets her just deserts. All these assessments and judgments are exemplars of conduct—in particular, of socially reproached and punished as well as of socially approved and rewarded conduct.

The illustration of witch-defining features entails a leap from detecting an abstraction to applying it to other situations and contexts. This extension is part and parcel of exemplification. If the identification of an exemplar in a given context (i.e., the recognition of a resemblance between a familiar abstraction and a particular manifestation of that abstraction) were the terminal stage of the process, exemplification would be of little relevance to communication. As it stands, however, exemplification is mostly the starting point in that the world of exemplars appears to influence our perception and judgment of essentially all phenomena and issues of the so-called real world.

Analogous to forming impressions and dispositions toward entities and happenings on a sampling of pertinent experiences, our perception and judgment of phenomena and issues with which we have little or no immediate contact are bound to be influenced by samplings of mediated events. Such influence can be seen as the result of nonconscious inductive inference (Bargh, 1996; Kissin, 1986; Lewicki, 1986). The more general case is inferred on the basis of limited mediated experience with relevant happenings. For the vast majority of the citizenry, for instance, violent crime is not immediately experienced. Yet perceptions are formed on the basis of news reports, friends’ hearsay, and possibly fictional portrayals. Moreover, judgments of the moral variety are formed on the basis of these perceptions. We may smile or cringe when a child, apparently as the result of frequent witch exemplification in Grimm-style fairy tales, points to a lady in the street and utters, “A witch, a witch!” But do we examine the etiology of our own beliefs and dispositions, especially with regard

to the likely influence of communication-mediated exemplars? Surprisingly little attention has been paid to this aspect of interpersonal and media influence.

In hopes of correcting this neglect, the potential influence of communication-mediated exemplification is subjected to the conceptual scrutiny presented here.

EXEMPLIFICATION AND REPRESENTATION

In conveying information about the flow of happenings in the so-called real world it always has been deemed appropriate, if it was not plainly recognized as a necessity, to cut this flow into manageable chunks and to isolate and focus on some events at the expense of attention to occurrences in between (Burns, 1992; Rosch & Lloyd, 1978; Tversky & Hemenway, 1984). Narratives, as a rule, leap from event to event, irrespective of the events' locality and position in time. More important here, narration aggregates events that exhibit sufficient phenomenal similarity to warrant their being classified as manifestations of the same kind. Such grouping implies that each and every grouped event, to the extent that it shares all essential attributes with the remaining grouped events, is capable of representing the group at large—meaning, that it is capable of providing reliable information about all other events in this group and thus about the group itself. It is this capacity of individual events that defines them as exemplars of an event group. Given that the events in a particular group share all essential attributes, as was stipulated, each and every group member would indeed exemplify the group attributes. If, for instance, it can be considered established that all humans are mortal, each and every human would exemplify human mortality.

The outlined paradigm of representation is, of course, an abstraction. Since antiquity it has been argued that no two events are truly alike. Grouping, classifying, or categorizing on grounds of likeness has been practiced through the ages nonetheless (Burns, 1992; Mervis & Rosch, 1981; Hayes-Roth & Hayes-Roth, 1977). Economy and efficiency of thought and information conveyance would seem to necessitate it. It should be clear, however, that conditions in which grouped events are fully interchangeable, and thus capable of representing the group without error, exist rarely, if ever. Especially in the realm of human affairs, exemplification is bound to be less than perfect, and a certain degree of imprecision is unavoidable and also may be immaterial for many practical purposes.

The indicated imprecision, formally expressed, derives from the fact that events are necessarily grouped on the basis of a limited number of attributes, with a potentially large number of additional attributes remaining unidentified or

being ignored. If n attributes are identified and employed as grouping criteria, m attributes may vary freely. For instance, if the group event is defined as carjacking committed in the United States during the 1990–1996 period by men aged 15–25 years, any particular carjacking within this group is likely to exemplify the specified crimes only poorly because some perpetrators will have only threatened violence, whereas others may have used force, even deadly force, against the evicted car owner. Exemplification of the crime by any particular crime thus cannot fully and impartially represent the grouped crimes.

Conceptually, precision in exemplification is readily specified. It requires that n , the number of defined attributes employed as grouping criteria, be associated with $m = 0$, the number of undefined attributes that, nonetheless, may be pertinent. Or, in case it is recognized that $m > 0$, m must be reduced to zero by incorporating the m attributes in n . In the carjacking illustration, this would mean that subgroups be created and exemplification limited to these subgroups. For instance, the group of deadly carjackings would have to be isolated and could be exemplified only by individual cases of deadly carjackings. Carjackings by other means would have to be treated analogously. Such group partitioning by increased definitional specificity would be recursive without apparent end. In the carjacking illustration, deadly force may, after all, have been applied in different ways; for instance, by clubbing, knifing, or shooting. The number of grouping attributes would have to be increased again, producing an ever larger number of ever smaller, yet more specific, event groups. The direct, single-case exemplification of the crime of carjacking irrespective of particular manifestations would no longer be feasible because the subgroups, unless their case count is zero in all but one of the groups, are bound to reveal marked differences in the manifestations of the grouped events. Depending on one's focal interest, then, it will have to be allowed that m , the number of undefined and uncontrolled attributes, be larger than zero. Variation in these attributes will have to be accepted on grounds of practicality, meaning that some degree of imprecision in exemplification is to be tolerated in order to achieve greater efficiency in the conveyance of information about grouped events.

Although some imprecision in exemplification may be unavoidable, the concept of representation implies that the highest degree of precision attainable under given circumstances be pursued. Common definitions of exemplification stipulate that a group of events be represented by single events that are typical and characteristic of the group. Exemplification by atypical and uncharacteristic events is deemed inappropriate because it fails to provide reliable information about the group. The arbitrary selection of "a case in point" can have utility only for the exemplification of a homogeneous event group; that is, for a group with

minimal variance in uncontrolled attributes. Whenever such variance is more than minimal, which it is likely to be for most issues of concern, exemplification by arbitrary selection would seem to be unacceptable—even irresponsible, if the object is to provide veridical information about an event group.

For instance, if carjackings with deadly outcome amounted to a trivial number, and noninjurious outcomes accounted for almost all crimes of this kind, it would seem inappropriate, indeed, to exemplify the crime of carjacking by presentation of a deadly case only. Such inappropriate exemplification is bound to mislead the recipient of the information, resulting in erroneous conceptions about the danger associated with the crime at large.

The obvious limitations of exemplification by “a case (i.e., one case) in point” can be overcome, of course, by exemplification that draws on multiple exemplars. Not that using several or numerous exemplars guarantees greater precision in representation. Arbitrary selection of exemplars may lead to duplications of partiality and thereby escalate misrepresentation. The selection of two or three deadly cases in our carjacking illustration should make that point. Representational accuracy would be better served if exemplars were selected blindly. In our illustration, the most frequently occurring forms of carjacking would likely be drawn to represent the crime; and greater accuracy would be insured, to a point. The frequent case, it should be noticed, defines what is to be considered typical and characteristic. If carjacking, for instance, is mostly injury-free, this attribute is typical and characteristic. Exemplification by a small number of blindly drawn exemplars, say three or five, would bring out this property of carjacking. It would furnish a reliable projection of the crime of carjacking in these terms. However, exemplification would probably not include deadly carjackings because of their extremely low incidence. Representation by a small number of blindly drawn exemplars thus may still be considered imperfect. It is likely to be incomplete, thereby allowing or fostering erroneous assessments of the grouped events. Only the use of large numbers of exemplars would insure the inclusion of infrequently occurring but nonetheless relevant events. Clearly, representational accuracy for a large event group would be higher, the closer the number of blindly drawn exemplifying events approximates the total of grouped events. However, although the employment of such large numbers of exemplars accomplishes great representational precision, it is often or mostly unworkable because it entails a forbidding amount of redundant information about the typical case. In our illustration, the recipient of an account of carjacking might have to be informed about hundreds of frequent cases before being appraised of the fact that carjacking may have deadly outcomes as well.

An apparent way out of this dilemma is, of course, to attach quantitative information to specific exemplars. The typicality of particular occurrences within a group of events would be defined in frequencies or proportions. The effectiveness of such presentational strategies in terms of acquisition, processing, retention, and retrieval of the supplied information by recipients remains to be seen, however.

EXEMPLIFICATION FORMATS AND STRATEGIES

Our introductory comments may have made apparent that the representation of a group of events by exemplar events resembles that of the representation of a population of events by a sample of events. The relationship between exemplification and sampling is indeed strong enough to accept the representation of population events by sampled events as a model for some forms of exemplification. We shall, in fact, adopt much of the well-established nomenclature and procedures of statistical representation and inference for particular types of exemplification. However, there exist formats of exemplification that differ considerably from the statistical model, and we shall modify this model as the circumstances require.

We shall first formalize exemplification processes that are analogous to sampling from a specified population and thereafter consider exemplifications that define populations.

Exemplification of Known Event Populations

A *population* of events is defined as a usually finite aggregate of events that share a limited number of specified characteristics, but that may differ in numerous unspecified properties. A *sample* of events is defined as any possible subset of the population events. A *random sample* of events is defined as any subset of the population events for which every sampled event had the same chance of inclusion. This is the condition of equiprobability that insures impartial, unbiased representation of the population by the sample. A *subpopulation* of events is defined as a subset or stratum of the population of events. Events subsumed in subsets or strata are specified by a limited number of characteristics in addition to those specifying the events of the population. Sampling from a subpopulation is analogous to that from a population.

In the special case of complementary subpopulations of known size, samples drawn randomly from the subpopulations may be combined in proportion to their size to represent the population. This process, known as *stratified sampling*, is

economical in that it prevents redundant oversampling in large subpopulations while insuring consideration of small subpopulations.

These concepts apply directly to the exemplification of well-defined, known populations and subpopulations of events. A minor adjustment concerns population size. Regarding exemplification, the mathematical abstraction of nonfinite, indefinitely large populations (that serves the estimation of a quantified property of events under consideration) has no utility and is unnecessary. Populations known through direct or recorded observation are by definition of finite size. Moreover, known populations are not imagined ones, but are presumed measured in some fashion (i.e., in terms of defining attributes and size).

Acceptance of these modifications allows usage of the established statistical concepts in specifying the conditions of impartial exemplification of known populations and subpopulations of events. An *exemplar* is, of course, nothing other than an event subsumed in a population or subpopulation. Regarding human affairs, population events of concern are also referred to as *issues*. For instance, all cases of melanoma from excessive sun exposure define a health issue. Likewise, all cases of illiteracy define a relevant social issue. But judgmental matters such as the perceived quality of wine from the last harvest or the appropriateness of using cellular phones in fine dining establishments also constitute issues.

We are now in a position to specify the conditions for the impartial exemplification of known, empirically established issues.

1. Issues defined by a known event population are impartially represented by any number of exemplars randomly selected from this population.

2. The precision of representation is a joint function of unspecified and hence uncontrolled variation of characteristics within the exemplars and of the number of exemplars. Specifically, representational precision decreases with the number of uncontrolled characteristics and increases with the number of exemplars. As a consequence, impartial exemplification is best achieved by increasing the number of randomly selected exemplars as the number of uncontrolled exemplar attributes increases.

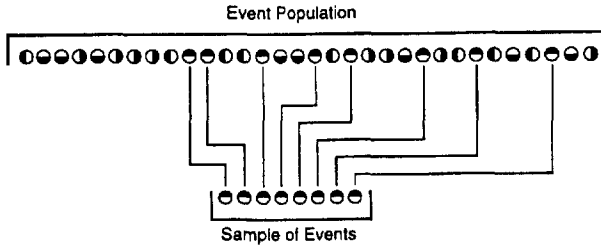
For instance, if persons who caused accidents by driving recklessly define a social issue, exemplification of their population with a small number of exemplars might prove inadequate because numerous relevant characteristics would go unrepresented. Random selection might yield three young men—one Black, two White. Persons of other age, gender, and ethnicity would not be represented. Neither would conditions such as personality and habits pertinent to dangerous driving. Employment of a larger number of exemplars would offer

some degree of protection against misrepresentation by the likely inclusion of these variables. Small exemplar numbers are adequate only under conditions where uncontrolled variance is minimal or immaterial. Representation by a single exemplar can be adequately representative only if the uncontrolled variation of characteristics is nil.

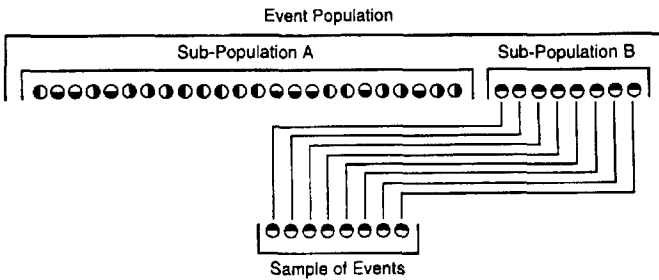
3. The precision of representation can be increased by the division of the population into subpopulations of known size. After subdivision by specified characteristics, three procedures can be employed: (a) Analogous to stratified sampling, in stratified exemplification a comparatively small number of exemplars is drawn from all subpopulations, with the size of these subpopulations as associated indicators of the prevalence and typicality of events in the subpopulations; (b) Alternatively, the proportions defined by the size of all subpopulations of the population of events are used as a guide in drawing specific numbers of exemplars from all subpopulations. Large subpopulations, then, are represented by large numbers of exemplars, small subpopulations by small numbers. Extremely small subpopulations define a limiting condition. Their representation in such proportional exemplification may require excessively large numbers of exemplars representing large subpopulations. The indicated redundancy could be eliminated only by foregoing the exemplification of extremely small subpopulations; (c) Finally, an admixture of both procedures may be used to overcome the limitations of proportional exemplification. That is, proportional exemplification is employed initially. If it yields unmanageable redundancy for large proportions or no representation for minuscule ones, the proportion is conveyed along with the disproportional number of exemplars that amounts to under- or overrepresentation, respectively.

Figure 1 shows extremely selective exemplifications that yield misrepresentations. Figure 2 gives an overview of exemplification strategies that provide unbiased representations.

In terms of the reckless-driver illustration, stratified exemplification would have involved segregation of the population by age, gender, and/or ethnicity. The absolute or relative size of the resulting subpopulations would have been indicated in connection with an arbitrary number of exemplars from each subpopulation. In proportional exemplification, by contrast, the size ratio of each subpopulation to the population would have been used to select exemplar numbers that are proportional with each subpopulation's size. Only if, as has been discussed, redundancy is deemed intolerable or nonrepresentation results would proportionality be indexed by means other than the relative number of exemplars.

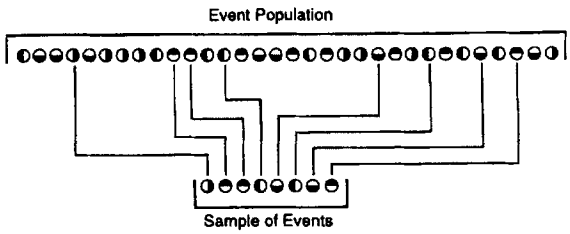


Selective Exemplification
Model A

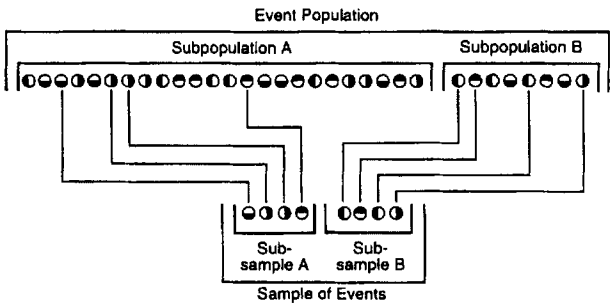


Selective Exemplification
Model B

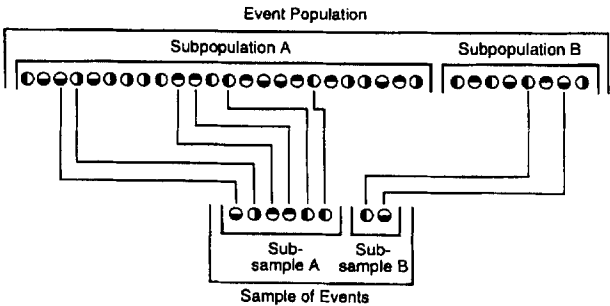
Figure 1. Schemata of selective exemplification. (A) From a finite population of events that vary along four attributes, a sample of events characterized by just one of the four attributes is arbitrarily drawn. The population at large is misrepresented. If the events were carjackings in which the victim is either killed, badly injured, slightly injured, or not injured, the selection of carjackings with deadly outcome obviously would not provide a fair representation of all carjackings. (B) The event population is separated into a subpopulation in which events characterized by only one specific attribute are singled out and a subpopulation in which events are characterized by the remaining three attributes. Essentially, a selectively drawn sample is declared a subpopulation. Under these conditions, the focal subpopulation is well represented, whereas the neglected subpopulation goes unrepresented. More importantly, however, the population at large is as misrepresented as in (A).



Random Exemplification Model A



Stratified Exemplification Model B



Proportional Exemplification Model C

Figure 2. Schemata of random exemplification. (A) From a finite population of events that vary along four attributes, a sample of events is randomly drawn. The population at large is represented without bias in that events of each attribute had the same chance for

inclusion in the sample. If the events were carjackings (see legend to Figure 1), all consequences for victims would be included approximately proportionally with their occurrence, and an impartial, fair account of all carjackings would be provided. (B) Random samples are drawn from known subpopulations of the population of events. The samples are eventually combined to provide an unbiased representation. (C) Knowledge of the size of subpopulations is used to draw random subsamples that are proportional in size with that of their respective subpopulations. The combined subsamples provide an unbiased representation of the population of events. The procedural advantages of schemata (B) and (C) over schema (A) are described in the text. In terms of representational accuracy, these procedures may be treated as equivalent, however.

All these exemplification strategies (i.e., 3a, 3b, and 3c) are superior to random exemplification of the population at large (a) in that they inform about the events in subpopulations (i.e., events that otherwise are left undefined), and (b) in that impartial representation of the population of events is achieved with fewer exemplars; that is, with lesser presentational investment as well as with lesser processing effort for the information recipient. Stratified and proportional exemplification would make clear, for instance, that the subpopulation of men entails more reckless drivers than that of women, or that the subpopulation of adolescents entails more than that of persons aged 30–50 years.

It should be emphasized that the exemplification procedures under consideration are presentational strategies. Which of these strategies will prove superior in terms of message reception, processing, retention, and retrieval is to be determined empirically. This is to say that presentational strategies may a priori offer impartial exemplification, but that information processing and its ultimate consequence, the perception of phenomena and the evaluation of issues, do not necessarily follow a priori considerations. How recipients interpret particular exemplifications, and how their interpretation affects their perception and judgment in the short and long term, is a posteriori and thus must be ascertained by empirical exploration.

Exemplification of Unknown Event Populations

The exemplification of events of a population about which little, if anything, is known might be considered a misconception. Indeed, if the distribution of events in the population, especially in its subpopulations, is unknown, notions of representation, of impartial representation in particular, are inapplicable and misplaced. It would seem inappropriate, for instance, to consider two captured Indian headhunters from an entirely unknown tribe somewhere in the Amazon rain forest representative exemplars of all indigenous people of the region. Likewise, it would seem inappropriate to deem the articulated attitudes toward

the institution of marriage by a handful of French youths representative exemplars of most, if not all, French adolescents.

Such inappropriateness does not preclude, however, that recipients of information about individual cases form impressions of a presumed population of similar cases. Recipients, as a rule, do nonconsciously infer that the properties observed in a few instances apply to the aggregate of like instances (Higgins, 1996; Lewicki, 1986; Nisbett, Krantz, Jepson, & Kunda, 1983). It is this deep-rooted inclination to generalize observed phenomena that gives individual events the status of exemplars.

Thus, although the representativeness of the exemplification of unknown populations is indiscernible from the perspective of presentational strategy, exemplification manifests itself post facto in the inference of an extended distribution of exemplified events. Alternatively expressed, the recipients' nonconscious inference of an extended distribution of events defines the events on which the inference is based as exemplars.

Granted that the representativeness of exemplification cannot be formally specified for unknown event distributions, inferences about population events are not entirely idiosyncratic on the recipients' part. Information conveyors using exemplars may invite or discourage inferences about presumed population events, thereby influencing the likelihood that recipients will arrive at appropriate or unwarranted conclusions. They consequently have to assume some degree of responsibility for the presentation of exemplars if the object is to provide an assessment of circumstances that is most likely to be correctly interpreted.

On intuitive grounds, then, the following guidelines may be suggested for the prevention of habitual misinterpretations of exemplars that are used under conditions where little or nothing is known about the event population.

1. As a premise, recipients are likely to interpret events not identified as unique or singular as exemplars of a larger event population. In other words, they tend to presume or infer by induction the existence of further similar events on the basis of a few known similar events. Figure 1 indicates this tendency to construct imagined populations essentially by the multiplication of observed exemplars.

2. Given this interpretational disposition, conveyors of information about unique, singular cases should specify that event status to prevent misinterpretation.

3. Information conveyors who provide exemplars without knowing the extent of their prevalence should indicate the lack of such knowledge in order to prevent misinterpretations.

It should be emphasized again that the effectiveness of these presentational strategies remains to be determined empirically. Specifically, it must be determined whether the reception, processing, retention, and retrieval of qualifying information, whose stimulus and ideational properties are likely to be less imposing than those associated with exemplifying happenings, can assert itself and function as a corrective, especially with the passage of time after exposure.

EXEMPLIFICATION IN DIFFERENT DOMAINS OF COMMUNICATION

Exemplification permeates all domains of human communication. As our immediate experience with the events that constitute social and societal issues is limited, our perceptions and evaluations of, as well as our dispositions toward, these issues are largely formed on the basis of event accounts that others, who have observed or experienced the events under consideration, relate to us. Such event reports are, of course, communicated exemplars.

The original form of exemplar communication is, no doubt, the conveyance of others' direct observation or experience. Early hominids, for instance, may have learned from companions that certain mushrooms they ate prompted violent convulsions, whereas bone marrow made them feel great. Especially the report of such experience by several companions should have invited the highly useful inference that the ingestion of the items in question would yield similar reactions in all others, oneself included.

Interpersonal exemplar communication is no less relevant in contemporary society. We still learn about the characteristics of specific populations or subpopulations from our friends and acquaintances. They might relate to us, for instance, that they got into a scuffle with hostile Punk fans, or that they got bitten by geese. As a result, our dispositions toward members of these entity groups might shift toward greater caution. But we might also learn from two coworkers in the office that some of their college-age daughters got divorced after less than a year of marriage and be tempted to believe that early marriage does not last.

Communicated experience may not be truthful, of course, and impressions and dispositions formed on the basis of such revelations may be unreliable. This assessment applies especially to reports of exemplifying happenings that have not been directly experienced by the information conveyor, but by others who may have learned about the happenings from yet others. Potential distortions in such hearsay chains do not rule out, however, that the exemplars conveyed in them exert a degree of influence on the perception and judgment of issues involved.

In contemporary society, the conveyance of exemplars is largely delegated to professional organizations known as “the media.” Newspapers, news broadcasts, and alternative, primarily electronic, computerized news delivery systems have made it their business to inform the citizenry about happenings and issues of concern from around the globe and beyond. We learn, for instance, of starvation in Somalia and are exposed to its exemplification: mostly the images of starved, gaunt children close to death (Sharkey, 1993). We similarly learn about Jews who call for the death of all Palestinians and about Palestinians who call for the death of all Jews (Gan, Hill, Pschernig, & Zillmann, 1996). Sometimes we learn how typical or atypical particular occurrences are. However, often it is left for the recipient to infer the frequency of occurrences of interest, the inference of prevalence and typicality being invited. In efforts of making a news story appear to address a relevant social issue, or on the mere suspicion that the exemplars might relate to a broader issue, reports conclude at times with assertions such as, “This is by no means a single case!” or, “We see this more and more!” (Brosius, Breinker, & Esser, 1991). On occasion, however, news reports can and do provide reliable information about the incidence rate of particular phenomena.

The latter is generally not the case for two obviously incompatible domains of exemplar communication: advertising and fiction.

Advertising, and public-relations efforts along with it, can be viewed as persuasive undertakings in which only supportive exemplars are selected. Nonsupportive and challenging exemplars are banned as counterproductive. For instance, in the form of personal testimonials exemplars abound in advertising (Daschmann & Brosius, 1997). They consistently express satisfaction with, if not exuberance about, a product or service consumed. It is utterly unlikely that dissatisfaction is exemplified as part of a campaign. The same selectivity is found in the articulation of positive versus negative features of promoted products or services. This supportive–nonsupportive bias is reversed, of course, for competing products or services that are addressed in direct comparisons with promoted ones. Such comparisons appear to have become the rule in political advertising. It has been suggested, in fact, that political campaigns tend to give more emphasis to consistently negative exemplification of the intentions and actions of opponents than to the consistently positive exemplification of the intentions and actions of the promoted candidates (Johnson-Cartee & Copeland, 1991). In short, advertising defines a domain of communication in which patently distorted exemplification is expected and accepted. Unlike news, the burden of exemplifying a population of happenings in impartial, representative fashion is not placed on advertising.

In this regard, and only in this regard, fiction parallels advertising. Fiction is obviously not tied to being veridical in its portrayals of the world. It is free to present happenings that have a high degree of similarity with persons, creatures, circumstances, and events that actually exist or happened, respectively. Fiction is also free, however, to disregard totally any linkage to actual entities and events.

Granted that exemplifications in the fictional portrayal of entirely imagined worlds without resemblance to the realities before us (under the assumption that such fiction exists; cf. Ward, 1994) may not appreciably influence the judgment of earthly phenomena, fictional portrayals that claim a high degree of realism have been suspected of influencing the perception and evaluation of issues. For instance, it has been suggested that the abundance of fictional portrayals of interhuman killing fosters emotional callousness and promotes violence in adolescents eager to emulate their violent fictitious heroes (Geen & Thomas, 1986; Huesmann & Eron, 1986). Analogously, focus on exemplars of victimization has prompted the contention that fiction consumers develop fears of becoming targets of violent crime themselves (Gerbner & Gross, 1976b; Gerbner, Gross, Morgan, & Signorielli, 1986). Moreover, it has been projected that the exemplification of sexual behavior in erotic fiction provides a distorted view of human sexuality and influences sexual dispositions and behaviors (Zillmann & Bryant, 1984).

In the form of explicit pornography, erotica define a genre-admixture in combining elements of fiction with documentary, news-like elements. Such admixture is also found in historical portrayals of mostly political and cultural events. In the so-called docudrama, events that are purely fictional are intercut with events recorded in documentaries. Fictionalized reenactments are added to further confuse recipients about the fact-fiction status of event portrayals. It can only be suggested here that numerous fictional exemplars might be mistaken for exemplars from documentaries and news programs, with the result that recipients process the information as veridical when they should not, thereby giving undue influence to fiction (Perry, Howard, & Zillmann, 1992).

Exemplification, finally, abounds in educational communication, including science education. The singular exemplar is typical. It is selected to serve as an analogue or illustration of a principle. For instance, dropping objects of different weight from a tower in Pisa is a spectacular exemplar that helped Galileo make an unforgettable point about gravity. So is the exemplar of Einstein's conception of gravity as an acceleration differential; that is, the exemplar that has us imagine the weight sensation of a person in an accelerating enclosure within an enclosure that is in free fall. Exemplars appear to have the capacity of making abstractions comprehensible—abstractions that are difficult to understand in their formal

expression. Psychological phenomena, such as suspense, can be similarly exemplified. Hitchcock's (1959) account of a couple engrossed in a discussion while walking toward an open manhole on the sidewalk exemplifies all aspects critical to the experience of suspense: (a) protagonists in peril (i.e., in danger of knocking their teeth out), (b) their being oblivious to the danger, and (c) the audience being cognizant of it.

On the other hand, exemplification in education is no different from exemplification in other domains of communication in meeting with the same pitfalls when entity or event distributions associated with considerable uncontrolled variance are considered. Exemplars of typical murderers, typical sports fans, typical neurotics, typical Type-A persons, typical feminists, and so forth, are likely to be rather nontypical in that they tend to be drawn from among the more extreme and memorable cases rather than from among the most frequently occurring ones.

EXEMPLIFICATION IN PERSONAL EXPERIENCE

Personal experience can be viewed as the memory trace of continually encountered exemplars. Analogous to the chunking of information in communication, the flow of sensory information about external and, to a lesser degree, internal conditions is also broken down into manageable chunks. Pertinent circumstances and events are isolated and stored for later consideration. In other words, exemplars of immediately encountered conditions and events are aggregated in memory. The encounter of similar conditions and events is likely to activate this memory, adding to it as well. More importantly, whether consciously or unconsciously, this memory of exemplar experience is bound to influence related behaviors.

The conceptualization of experience as the result of the direct encounter of strings of exemplars obviously implies that individuals categorize happenings (Burns, 1992; Mervis & Rosch, 1981). Such categorization is implicit, in fact, in the adaptive behavior of all organisms capable of using retained information in their adjustment to changes in the environment (Griffin, 1984; Mackintosh, 1974; Pearce, 1994). For instance, brown rats are known to learn to avoid poisoned food by witnessing members of their pack ingest the food in question, exhibit convulsions, and die. They must be able, then, to causally connect specific food with ill effects and to store this exemplar experience for later behavior guidance. The indicated processes are the same, of course, for hominids who had to learn, for instance, the difference between becoming and unbecoming food items and between innocuous and dangerous animals.

The process by which we learn to associate properties with entities through the direct encounter with pertinent exemplars thus is a most fundamental one and does not depend on conscious information processing and elaboration (Bargh, 1984; Kissin, 1986; Lewicki, 1986). By direct encounter we learn, for instance, that it hurts to touch fire and to fall off a ladder, and that it does so consistently. On the other hand, we learn that not all dogs bite and that not all people are nice. We manage such cases in which covariation is less than perfect by acquiring a sense of the degree of consistency. If we encounter seven chow chows on different occasions, and they all turn out to be peaceful, we have an experiential basis for considering chow chows peaceful and, in future encounters, interact with them accordingly. Should they all turn out to be hostile, we form the opposite disposition and approach them henceforth with caution. Should two of them be friendly and the remaining five hostile, we are likely to be cautious but allow for exceptions. The point is that our dispositions reflect a quantitative assessment of exemplar experiences, not necessarily in precise numerical estimates but in proportional terms.

It should be recognized that the indicated ability served communication-deficient prehistoric humans rather well. As their expectations and dispositions were almost entirely based on personal observation of, and experience with, events of consequence, the exemplars encountered were likely to provide accurate, dependable information about the event group at large. Storage and retrieval of the covariation between pertinent phenomena and their attributes provided reliable behavior guidance in most vital situations. The possibility of encountering entirely atypical exemplars, such as gentle leopards or ferocious rabbits existed, of course, but the incidence of encounters of this kind can be considered to have been trivial and of little moment.

These circumstances changed drastically with the advent of representational communication. Expectations and dispositions now were subject to influence by others who related their observations and experiences, as well as by third parties who related their own observations and experiences to these others. Such extension of information about phenomena has, of course, enormous utility in making much personal experience superfluous and unnecessary. Perceptions and dispositions about a world of phenomena can be formed solely on others' observations and experiences. This potentially vast perceptual and dispositional enrichment comes at a risk, however. Its utility hinges on its veridicality, meaning the extent to which the conveyance of others' observation and experience is accurate and representative. The veridicality condition will not always be met, however, because the conveyed information may be modified and distorted to serve the conveyors' interests, intentionally or inadvertently so.

This assessment applies, of course, to communication in contemporary society. Specifically, it applies to all forms of interpersonal communication, to all levels of stratified communication, and to mass communication proper. Considering the news and also educational efforts, the available means of exemplar gathering entail the risk that the aggregation of exemplars in such expositions serves purposes other than the explicitly or implicitly declared provision of the highest degree of representativeness. Some distortions may serve ideological objectives, others the dictates of commercialism. Yet others may result from “established practice” and thoughtlessness. Whatever their cause, however, the problem of deficient representativeness of the exemplification of pertinent phenomena or issues by the communication media is inextricably linked to the preselection of exemplars intended to substitute for personal perception and experience.

THE INTERFACE BETWEEN DIRECT AND MEDIATED EXPERIENCE

The substitution and expansion of personal perception and experience by the conveyance of others’ perceptions and experiences raises the question of whether mediated accounts of “reality” are treated as equivalent with direct observation and experience or given lesser credence in the formation of judgments of phenomena and of dispositions toward issues. Moreover, the question arises as to whether presentational formats, such as news and fiction, exert similar or distinctly different degrees of influence on judgments and dispositions. Additionally, the mode of representation, iconic with high reproductive fidelity of audiovisual phenomena or symbolic with essentially no stimulus similarity between the message and its referent, may exert a degree of influence.

Using our chow chow illustration, would a neighbor’s description of an attack by such a dog be as consequential as witnessing the attack? Would seeing the attack in the news or in a movie impact judgment similarly or differently? Might there exist a hierarchy of compellingness that starts with iconic representation in the news or documentary format, followed by the symbolic representation in these formats, followed in turn by fictional iconic portrayal, and ending with fictional symbolic representation? Or could it be that iconic representation, because of its sensory quality, generally dominates symbolic accounts (Zillmann, 1997), irrespective of the “reality status” ascribed by the format?

The possible interdependencies between format influence and personal experience have been addressed in the debate over the effects of media violence on crime apprehension. Violence in the media is prevalent in fiction, of course,

but it is also featured in the news. Some investigators have lumped these formats together and, on the basis of their findings, suggested a dominant influence of media portrayals of violence (Gerbner & Gross, 1976a). Others have challenged such contentions and demonstrated that crime apprehension derives first and foremost from direct and quasi-direct experience with crime (Doob & Macdonald, 1979). Yet others have shown that violent crime reported in a news or documentary format affects crime apprehension more strongly and for longer periods of time than does violent crime featured in fiction (Tamborini, Zillmann, & Bryant, 1984; Zillmann & Wakshlag, 1985).

Such discrepant findings leave the issue unresolved. However, this circumstance does not prevent many, who consider themselves media experts, to claim that fictional portrayals of violence are inconsequential for perceptions, dispositions, and behaviors related to violence. In endless debates of the issue, the asserted nil effect of fictional portrayals of violence and of other fictional or semifictional media fare, such as erotica, tends to be explained with the insinuation that “people know better.” Implied is that people readily identify the fiction format and, once they accomplished that, are able to discard the information from consideration in the formation of judgments and dispositions concerning addressed “real life” issues.

What appears to be common sense to many can be expressed in a tag model of presentational format. In such a model it is assumed that a format tag is stored along with exemplars; upon retrieval, the tag informs the individual that the associated information is direct observation, mediated observation conveyed in a news or documentary format, or mediated observation conveyed in fictional format. To the extent that the tag processing is conscious and deliberate, the indicated format segregation can be retained, and individuals would be afforded a degree of protection against undue media influence. The assumption of prolonged segregation of this sort is open to challenge, however. It can be argued that in an information-rich environment individuals are not able to trace exactly how they learned about particular accounts of events. They may be neither conscious of formats nor motivated to engage in efforts to protect themselves against influence associated with them—assuming that they could if they tried. As a result, they may confuse fact and fiction in many domains of perception and judgment.

Obviously, the issue can not be decided by purely conceptual examination. It remains to be determined empirically whether exemplars tagged *fiction* are without appreciable influence on judgments and dispositions, exemplars tagged *news* have some degree of influence, and exemplars tagged *experience* exert unwavering influence.

POSTSCRIPT

An exhaustive discussion of the empirical research, mostly experimentation, pertaining to the effects of various exemplification practices and strategies on perceptions and dispositions can be found in a forthcoming book by Dolf Zillmann and Hans-Bernd Brosius entitled *Exemplification in communication: The influence of case reports on issue perception*, published by Lawrence Erlbaum Associates, Mahwah, NJ. The exposition focuses on the function of news in society and advances recommendations for appropriate and optimal exemplification in reports on salient public issues.

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