
Explaining Real-Life Events: How Culture and Domain Shape Attributions

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Several lines of experimental research have shown that attributional styles are affected by the attributor's culture, inferential goals, and level of cognitive processing. Can these findings be replicated in natural settings? This study compared the attributions made in two domains (sports articles and editorials) of newspapers published in two culturally distinct countries (Hong Kong and the United States). Consistent with the cross-cultural research, attributions were less dispositional in the East than in the West. This cultural difference was weaker in editorials than in sports articles. The authors argue that the higher level of complexity, accountability, and uncertainty in editorials increased the cognitive effort expended to make attributions, which, in turn, attenuated their extremity. Implications for the mixed model of social inference are discussed.

One of the most widely researched areas within psychology is attribution theory (Heider, 1958; Kelley, 1967). Attributions, or making causal explanations for behaviors, are a basic and common human tendency. Understanding what causes things to occur in the world provides perceivers with some capability to foresee the consequences of events and with knowledge to guide their own behavior. It is useful, for example, to understand an interaction partner's dispositional attributes. A person who is mature and responsible will likely behave differently than a person who is unreliable; it may be prudent for one to behave differently with one person than with the other. Understanding situational causes for behaviors is also helpful for people to understand and predict events in their social world. It is reasonable to expect people to act differently in different situations; for example, it is useful to know whether someone is at a business meeting or at a romantic dinner. By making

attributions, people make sense of the world as it is, guide their own behaviors, and predict events in the future.

Through many years of research and theorizing, psychologists have discovered a few robust patterns of attribution. One of the best known of these is broadly known as *dispositionalism*, or people's general tendency to over-emphasize dispositional causes and underemphasize situational causes underlying behaviors. Dispositionalism has been given many labels, such as the fundamental attribution error (Ross, 1977), the correspondence bias (Snyder & Jones, 1974), or the overattribution effect (Jones, 1979). Dispositionalism has been shown to be highly pervasive; for example, both actors and observers emphasize dispositional causes over situational causes for behaviors (Jones & Nisbett, 1972; Ross, Amabile, & Steinmetz, 1977; Ross, Lepper, & Hubbard, 1975). Dispositionalism has also been shown to occur even when there is compelling contrary evidence. For example, in a classic study by Jones and Harris (1967), subjects read-

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ing essays arguing for or against a certain issue persisted in making dispositional explanations for the essays' content—namely, the authors' personal attitudes, even when explicitly informed that the authors' positions were assigned by experimenters.

Despite the extensive research literature demonstrating this strong dispositional bias, several lines of research have called into question the universality and generality of dispositionalism. First, some have argued that the research on attribution relies heavily on experimental studies that may not accurately reflect what people naturally do in everyday life. Second, an extensive body of cross-cultural research has shown, quite conclusively, that the tendency toward dispositionalism is culture specific. Third, recent experimental research has provided evidence that dispositionalism can be easily eliminated or reversed.

Overreliance on Experimental Research

One common criticism of past research in attribution is the artificiality of the research settings (Lau & Russell, 1980; Weiner, 1985). For example, subjects may be asked to read essays (Jones & Harris, 1967) or watch videotapes (Gilbert, 1989) created by the experimenters. The targets do not have any real relationship with the subjects, and the attributions made by the subjects are not meaningful outside the laboratory. In some experimental paradigms that involve a *cognitive busyness* manipulation, subjects engage in distraction tasks (such as memorizing word strings or counting backwards) that bear little resemblance to activities people normally do in their daily lives. Further, the attributions made are not spontaneous but reactive responses to the experimenters' solicitation, which may affect the attributions subjects produce. Krull (1993) pointed out that past researchers typically asked subjects to form attributions about the targets, perhaps experimentally orienting subjects toward dispositional characteristics and away from situational characteristics through their instructions. This may have caused overdispositionalism to appear more robust than it actually was. All these factors raise questions about how well attributions observed in artificial, reactive settings reflect what people spontaneously do when explaining meaningful, everyday events.

Cross-Cultural Research

There is strong evidence to suggest that dispositionalism is culture specific rather than universal. Numerous studies have found that people from Western cultures tend to make more dispositional attributions, whereas people from Eastern cultures tend to make more situational attributions (for example, Crittendon, 1991; Fletcher & Ward, 1988; Miller, 1984, 1986; Schuster, Fosterling, & Weiner, 1989; Shweder & Bourne, 1984; Smith & White-

head, 1984). This result is extremely robust; the difference in dispositionalism between Eastern and Western cultures has been replicated across different behaviors (prosocial and deviant behaviors, and successes and failures), different targets (friends, acquaintances, and strangers), and across different countries (the United States or England compared with India or Taiwan).

Shweder and Bourne (1984) suggested that the cultural difference in dispositionalism exists because at a very basic level, people may be "culturally primed" (p. 191) to emphasize dispositional factors or situational factors. Markus and Kitayama (1991) observed that in *independent* cultures (typically, Western cultures such as the culture of the United States), the self is seen as a unique, stable entity that exists wholly independent of social context. In contrast, in *interdependent* cultures (typically, Eastern cultures such as those of India and Japan), the self is understood to be inextricably linked to personal relationships and social roles. Markus and Kitayama argued that different ways of seeing the self affect individuals' tendencies toward naturally dispositional or situational attributions. If the self is seen as independent of context, individual behavior should be relatively consistent across a wide range of situations; thus gaining insight into others' dispositional characteristics should help understand and predict their behaviors. However, if the self is seen as interdependent on context, individual behavior should vary in different roles and situations; thus dispositional characteristics should be relatively less important than situational characteristics in understanding and predicting behaviors. Overall, it appears that in cultures in which it is more instrumental to understand dispositional characteristics, dispositionalism prevails; in cultures in which situational information is more important, dispositionalism is diminished.

Reversal of Dispositionalism

Inferential goals. Closely related to the cross-cultural independent-interdependent self framework is a line of research showing that individuals will explain things in terms of what they are motivated to understand. Quattrone (1982) modified Jones and Harris's (1967) essay paradigm to focus subjects on situational causes rather than dispositional causes. Instead of asking subjects to make attributions about the authors, Quattrone asked subjects to make judgments about how the experimenter may have influenced the authors. Quattrone's subjects attributed the authors' positions to the experimenters' influence even when they were explicitly told that the authors were writing based on their own beliefs. By orienting subjects to the situation—namely, the experimenters' influence—subjects made situational attributions even when there were obvious dispositional explanations.

Krull (1993) also reversed dispositionalism by orienting subjects to a situational cause for behavior. Krull's subjects watched a silent videotape of a woman who was speaking anxiously. Some subjects were told to diagnose the woman's dispositional anxiety, whereas other subjects were told to diagnose how anxiety provoking was the topic of conversation. Subjects who were focused on dispositional anxiety provided more dispositional explanations for the woman's behaviors, and subjects who were focused on the conversation topic provided more situational explanations. In short, people who were trying to understand characteristics of the target made more dispositional attributions, and people who were trying to understand the situation made more situational attributions.

This orientation to either understanding more about the person engaging in the behavior or the situation in which the behavior occurs is referred to as *inferential goal* (Krull, 1993). Whereas Quattrone (1982) and Krull manipulated subjects' inferential goals experimentally, it is not difficult to see how inferential goals could change in natural settings as well. Imagine meeting a graduate student who complained incessantly about his or her miserable life. If this graduate student turned out to be the perceiver's date, the perceiver's primary motivation would be to understand the graduate student as a person. This information could be useful for predicting how the student will behave and guiding the perceiver's own behaviors in future interactions. From the complaints, a number of dispositional inferences could be made: The student is a malcontent, a complainer, a stick-in-the-mud, or a pessimist. But if the perceiver was in the process of applying to graduate school, the primary motivation would be to understand graduate school life. This information could be instrumental in predicting what one's life would be like for a number of years. In this case, situational explanations for the complaints would come to mind. Maybe the workload in graduate school is too demanding, maybe the culture is not pleasant, or maybe it presents financial hardships. In either case, the perceiver's own inferential goals could play an important role in orienting the attribution toward dispositional or situational characteristics.

Levels of cognitive processing. Attribution is neither a straightforward nor a unitary process. Much current research considers attribution to be a multistage process. For example, Quattrone's (1982) anchor adjustment model posits that people form an initial judgment based on partial information, which may be corrected later to account for additional information. Gilbert, Pelham, and Krull (1988; Gilbert, 1989; Gilbert, Krull, & Pelham, 1988) also proposed a two-step social inference model in which individuals first have an automatic tendency to

make dispositional attributions; that is, dispositional explanations come to mind very quickly, without effort or conscious thought. Then, situational factors are considered in the second step. This involves a deliberate, controlled correction process that does not occur automatically; considering additional sources of information is effortful, and attributors must have adequate cognitive resources to perform this corrective step. Gilbert and his colleagues performed a series of experiments showing that when subjects were kept cognitively busy (for example, rehearsing words, being preoccupied with giving a speech, trying to ignore visual stimuli, or hiding true feelings), they were more prone to dispositionalism. On the other hand, when subjects were not cognitively busy, correction occurred and dispositionalism diminished.

The original two-step model proposed by Gilbert and his colleagues (Gilbert, 1989; Gilbert, Krull, & Pelham, 1988; Gilbert, Pelham, & Krull, 1988) assumed that dispositional attributions were automatic, whereas situational attributions were effortful. Krull (1993), on the other hand, suggested that sometimes, the automatic, effortless attribution may be situational and that correction may account for dispositional factors. Krull employed a cognitive busyness paradigm similar to Gilbert's (1989), but Krull also manipulated the inferential goal of the subjects. When the subjects were motivated to understand dispositional attributes of the target, Gilbert and his colleagues' original model was replicated: Cognitively busy subjects made relatively more dispositional attributions than subjects who were not cognitively busy. However, when the subjects were motivated to understand the situation, the results were reversed. Cognitively busy subjects made relatively more situational attributions than subjects who were not cognitively busy, suggesting an initial situational inference and, when resources were available, an effortful dispositional correction.

Based on these findings, Krull (1993) extended the original two-step social inference model to a mixed model of social inference (see Figure 1). According to this extended model, the initial automatic attribution may be either overly dispositional or overly situational. The direction of the initial attribution could be affected by the attributor's inferential goals or by culture (Krull, 1993). If the initial attribution is predominantly dispositional, the correction step takes into account situational factors, thereby attenuating overdispositionalism. On the other hand, when the initial attribution is overly situational, the correction step takes into account dispositional factors, thereby reducing oversituationalism. In contrast to the original social inference model, which holds that cognitive effort attenuates dispositionalism, the revised mixed model of social inference holds that cognitive effort attenuates extremity.

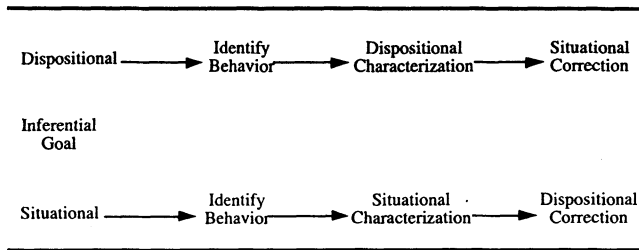


Figure 1 Krull's (1993) mixed model of social inference.

Consider the graduate student example given earlier. Someone meeting the graduate student as a blind date would initially assume dispositional causes for the complaints. But, assuming the person continued to reflect on his or her judgment, the extremity of the initial inference might lessen. He or she might recognize that graduate school can be a trying experience and that the student's behavior may, to some extent, be explained by situational factors. The case of the prospective graduate student illustrates the other component of Krull's (1993) model. Initially, motivated to understand what graduate school life would be like, the perceiver may automatically take the complaining to reflect the hardships of graduate school. However, with time and additional thought, the perceiver might come to think that, at least in part, the complaining was due to the student's disposition. Surely, not all graduate students are unhappy.

Present Study

Recent research on attribution has shown strong evidence that dispositionalism is related to both the perceiver's culture and the domain of the attribution task. Some cultures are more prone to dispositionalism than others because of more basic cultural differences in how the self is construed. Some domains are more prone to dispositionalism than others because of differences in the level of cognitive effort required to perform the attribution task.

However, much of the past research evidence is garnered from experimental procedures that have questionable external validity. The present study is an attempt to explore the hypothesis that attributional styles are related to culture and domain in naturally occurring settings. Specifically, this study explores attributions made in newspaper articles. Newspapers provide a rich source of unsolicited, naturally occurring attributions. Journalists and contributors in newspapers often try to understand current events by analyzing their causes (Lau & Russell, 1980). Unlike many experiments in which attributors are making attributions from fictitious, experimenter-concocted stimuli, the attributors in newspapers are forming attributions about real and meaningful events (Weiner, 1985). Further, the attributions made in newspapers by journalists are not solicited by

experimenters but are spontaneous explanations that occur when everyday events are being reported and analyzed.

We compared newspaper articles from two cultures (Hong Kong and the United States) and two domains (sports and editorials). Collecting attributions from Hong Kong and the United States allows a comparison between a Western, independent culture and an Eastern, interdependent culture (Bond, 1986; Markus & Kitayama, 1991). Based on existing cross-cultural research (Crittendon, 1991; Miller, 1986; Shweder & Bourne, 1984), we predict that newspaper articles from the United States will explain events more dispositionally, focusing on factors that are internal to the target, whereas articles from Hong Kong will explain events more situationally, focusing on factors that are external to the target.

Collecting attributions from sports pages as well as editorials allows us to compare attributional styles across different domains. Sports articles and editorials differ in many ways; most important, we argue that they differ on critical dimensions affecting the level of cognitive effort expended in the social inference process. Without insinuating that sports articles are simple and uncontroversial, we suggest that editorials more often have higher levels of (a) accountability, (b) ambiguity, and (c) potential for multiple construal and that these factors conspire to induce editorial writers to devote relatively more cognitive effort to their articles than sportswriters.

Accountability. When people are more accountable to others, their causal reasoning increases in complexity, which, in turn, makes them less prone to overdispositionalism (Tetlock, 1985). The format of editorials makes editorial writers more directly accountable than sportswriters for what they write. The editorial page is an open forum in which articles are open to critical scrutiny. An article written for the editorial page often elicits responses that criticize or rebut points made in the article. This is very different from sports articles; readers or other journalists rarely write public rebuttals to a sportswriter's account of a game. Further, the author of an editorial presents ideas, analyses, and opinions that are identifiably his or her own, whereas a sports article typically involves a much more objective reporting of facts. Readers may not hold sportswriters as accountable for what they have written because they recognize that "the facts speak for themselves" much more in a sports article. For example, it is likely that an editorial may provoke a response saying that an author is entirely wrong in his or her proposals for solving a major economic problem, but a sports article would not elicit a response saying that the author was entirely wrong in his or her claim that a certain player scored a crucial goal in the final seconds of a game. To the extent that editorial writers are indeed more accountable than sportswriters

for what they write, it is reasonable to suggest that editorial writers would expend more cognitive effort than sportswriters when writing their articles.

Ambiguity and uncertainty. The content of sports articles and editorials also differs in the amount of cognitive effort needed to understand issues in these two domains. Specifically, there is more uncertainty and ambiguity associated with topics covered in editorials than topics covered in the sports pages. A sporting event occurs within the framework of a clearly defined, unambiguous, closed system; the boundaries between players and non-players are clearly defined, as are the boundaries that contain a game itself. Each game has a clear beginning, end, and outcome. The game itself is governed by an explicitly defined set of rules. This is very different from the complex, ambiguous events that are written about in editorials, such as the repatriation of refugees, or the Middle East conflict. Often, these events involve many parties acting in a complex interrelated manner and whose roles may not necessarily be obvious. These events often do not have a clear starting or ending point but, instead, are situated in a broad historical context with numerous antecedent influences and future consequences. Further, events discussed in the editorial pages rarely have clear solutions that can resolve the situations neatly and cleanly. Because increased ambiguity has been shown to trigger more careful, accurate processing (Langer & Piper, 1987), it is reasonable to suggest that editorial writers undergo more effortful processing when writing articles than do sportswriters.

Multiple construal. Griffin, Dunning, and Ross (1990) found that forming multiple construals when making predictions about future events eliminates dispositionalism. Sports articles and editorials differ in the extent to which their authors make multiple construals for the events they are considering. In the editorial pages, there are often a number of articles that address the same issue from different perspectives; these articles frame the arguments differently, identify different causes for events, and propose different possible solutions. In contrast, in the sports pages, there will typically be only one account of a game that was played, presenting the event from a single perspective. For example, whereas it is common for multiple perspectives to be presented on issues such as health care reform, it is more difficult to continually reframe the reporting of a single game. Because editorial writers more often need to consider multiple construals, it is reasonable to suggest that more cognitive effort is expended in writing editorials than in writing sports articles.

The levels of cognitive effort that differentiate the writing of sports articles from the writing of editorials bear some resemblance to the cognitive busyness para-

digm introduced by Gilbert and his colleagues (Gilbert, 1989; Gilbert, Krull, & Pelham, 1988; Gilbert, Pelham, & Krull, 1988). Both paradigms employ a dichotomy that differentiates subjects on the basis of cognitive expenditure. Gilbert and his colleagues depleted cognitive resources available to the attribution task by requiring subjects to engage in a mundane, although mentally taxing, chore during the social inference process, such as rehearsing words or hiding one's true feelings. We, on the other hand, rely on differences that occur naturally in newspapers. We suggest that some forms of writing require different levels of cognitive expenditure, and, therefore, effortful correction will occur to a greater or lesser extent for different types of articles. Specifically, there should be more effortful correction in editorials than in sports articles.

How would attributional styles be different in editorial and sports articles? The original two-step social inference model assumes that automatic attributions are always dispositional and that cognitive effort attenuates dispositionalism. This model would predict that attributions in domains that are less complex and ambiguous, such as the domain of sports articles, would show more dispositionalism than attributions found in editorials. However, the original model does not consider how this effect would differ between cultures. In other words, regardless of overall differences in attribution style between cultures, the model predicts that cognitive effort will moderate dispositionalism equally in different cultures. Based on this model, one would expect a large overall difference between sports and editorial articles and a large overall difference between cultures (drawing from the cross-cultural research), but one would not expect a large interaction between culture and domain. Predictions of how culture and domain may affect attributions based on the original two-step model are illustrated in Figure 2.

However, Krull's (1993) extension of the two-step social inference model changes these predictions. According to the extended model, extremity, not dispositionalism, is attenuated by cognitive effort. One would expect U.S. sports articles to contain the most dispositionalism, because the initial culturally primed dispositional inferences are less likely to be attenuated by corrective situational processing. Conversely, one would expect Hong Kong sports articles to contain the least dispositionalism, as the initial and culturally primed situational inferences are less likely to be abated by further dispositional processing. However, overdispositionalism and oversituationalism would both be corrected in the editorials. The level of dispositionalism in U.S. editorials should be considerably lower than U.S. sports articles because, although initially primed to be overly dispositional, editorial writers are more likely to

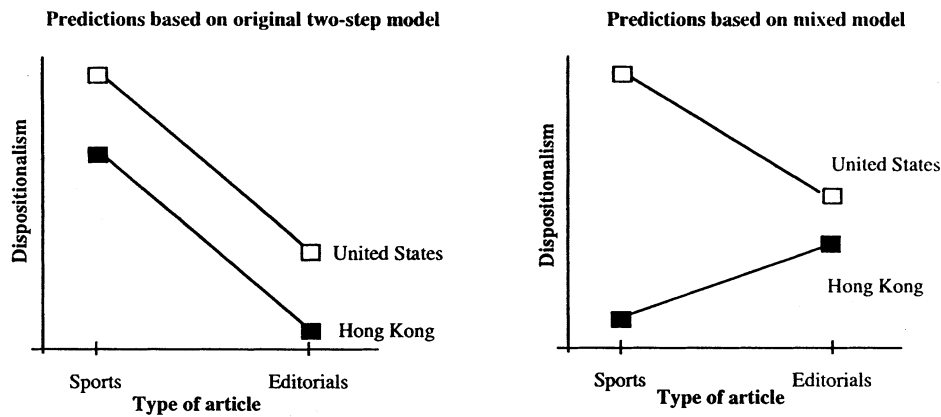


Figure 2 Predictions for effects of culture and domain on attributions based on Gilbert and colleagues' (Gilbert, 1989; Gilbert, Krull, & Pelham, 1988; Gilbert, Pelham, & Krull, 1988) original two-step social inference model and Krull's (1993) mixed model of social inference.

engage in controlled processing that allows for situational correction. Similarly, the low level of dispositionalism in Hong Kong sports articles would be raised in Hong Kong editorials because of more correction for dispositional factors. Thus, in addition to a large overall difference between cultures, the mixed model of social inference would predict a large interaction between culture and domain (article type) and a much smaller overall difference between editorials and sports articles. Figure 2 illustrates the hypothesized attribution styles for different cultures and domains based on Krull's mixed model of social inference.

Summary of Predictions

By examining naturally occurring attributions from newspaper articles, we predict that (a) there will be cultural differences in attribution style, such that attributions made in the United States will be more dispositional and attributions made in Hong Kong will be more situational; (b) based on the mixed model of social inference, cognitive effort will bring more extreme dispositional or situational attributions to more moderate levels, such that there will be an interaction between culture and domain; and, specifically, (c) dispositionalism will be strongest in U.S. sports articles, second in U.S. editorials, third in Hong Kong editorials, and weakest in Hong Kong sports articles.

METHOD

Research Design

The present study compares attributions made in newspaper articles from two domains (sports and editorials) and two cultures (Hong Kong and the United States). The key characteristic of our study is the naturalistic component; although we cannot causally link cul-

ture and domain to attribution style in this study, our main goal is to examine whether social inferential effects that have been experimentally demonstrated in a laboratory can be observed naturally.

A research design that retains the naturalistic component as well as the cross-cultural and cross-domain conditions must also take into account several preliminary considerations. Weiner (1985) cautioned that although sampling from newspapers provides a rich source of naturally occurring, unsolicited attributions, this methodology suffers from inherent flaws, such as response bias (attributors may withhold some of their attributions in a public forum), unrepresentative sampling (editors may only publish articles that expound a particular viewpoint), and some self-selection bias (perhaps only certain types of people become journalists). These biases also exist in our study and may vary between different cultures and domains; for example, editors' preference for certain viewpoints may vary between culture and domain, and perhaps different types of people become sports journalists versus editorial journalists.

Although all possible confounds cannot be controlled for in a naturalistic study, it appears that a valid cross-cultural comparison must control for the topics being covered in the newspapers. Because different sporting events are popular in different countries and because different social, economic, and political issues are salient in different countries, we expected articles in Hong Kong and U.S. newspapers to cover different types of events. However, comparing articles about different types of events from different cultures would introduce many confounds to our cross-cultural comparison, because differences across cultures may actually be attributed to differences in the type of sport or the type of editorial issue. Therefore, an important step in the research must include a careful selection of sports and editorial articles about comparable events in both cultures.

Procedure

Sports pages and editorial pages were collected from three U.S. newspapers (*Los Angeles Times*, *The Boston Globe*, and *The New York Times*) and one English Hong Kong newspaper (*South China Morning Post*) over a 5-month period (September 1991 to February 1992).

Selection of sports articles. There were two criteria for selecting sports articles for this research. First, articles had to be written by a local journalist. Articles from international wire services such as UPI, Associated Press, or Reuters, which presumably are written by journalists from all over the world, were not included. Although they may appear in an American or Hong Kong newspaper, wire service articles would not likely reflect the more culturally bound attribution styles of those countries. Second, articles had to cover sports that were written about in both American and Hong Kong newspapers. Selecting articles that cover the same sport better isolates the cultural differences in attribution. For example, a comparison of attributions made in American baseball articles and Hong Kong rugby articles would confound the cultural difference in attribution with differences between these two sports. American and Hong Kong newspapers cover very different sports events. Soccer was the only sport that received regular coverage in both Hong Kong and U.S. newspapers by local journalists for the 5-month sampling period; thus, it was the only sport that was examined in this research. Overall, 39 articles (11 U.S. and 28 Hong Kong) covering soccer matches were chosen as the study sample.

Selection of editorials. Similar criteria were used to select the editorials for this research. A preliminary reading of editorial pages for the 5-month sampling period also revealed that the editorial pages of American and Hong Kong newspapers covered very different types of topics. As with the sport articles, it was important to select editorials with roughly equivalent content to ensure comparability. We identified three topic areas that were covered in both the U.S. and Hong Kong editorials during the sampling period—repatriation of refugees (Haitian refugees from the United States; Vietnamese refugees from Hong Kong), environmental issues (e.g., air pollution, water shortages, protecting forests), and international conflict and violence (e.g., massacre in East Timor, the Middle East conflict, remembering World War II atrocities). Editorials covering these issues during the 5-month sampling period were included in the study. In all, 54 articles (35 U.S., 19 Hong Kong) were selected.

Coding

Past research has used a wide variety of methodologies to code for attribution style. In their study of newspaper

attributions, Lau and Russell (1980) selected individual statements from an article and coded them as either personal or situational. The present study adopts a more holistic approach; coders did not rate isolated statements from an article but formed summary ratings of attributions based on everything that a journalist wrote as part of an explanation for a specific behavior or event. We asked coders to read the entire article and to identify specific events or behaviors for which they thought a causal explanation was being offered. Then coders provided ratings of the extent to which that explanation emphasized personal and situation explanations. In this way, the event being explained served as the unit of analysis, and the coders were able to evaluate each explanation in the context of all that was said, explicitly or implied, about the cause of that event. Also, instead of using a binary coding system whereby coders rated the attributions as either personal or situational (Lau & Russell, 1980), the present study used a 9-point Likert-type scale to measure personal and situational attributions separately (Krull, 1993). This coding scheme does not force coders to choose between either personal or situational attributions, and it also permits a more sensitive differentiation of attribution styles.

Three undergraduates blind to the research hypotheses coded each article for attributional content. First, the coders read the entire article and identified unique events in the article for which causal explanations were offered. Coders rated each event separately. Coders first listed (a) the attributor or person making the attribution, (b) the behavior or event being explained, and (c) the target (person or group whose behavior was being explained). Each coder then rated the extent to which the attributions made to explain the event were personal and situational, both on a 9-point scale. Personal was defined as attributions referring to something internal to the target, whereas situational was defined as attributions referring to something external to the target (Lau & Russell, 1980).

The decision to include an event for analysis required consensus of at least two of the three coders that a causal explanation was being offered to explain the same event, matched by coders' description of the attributor, the event/behavior, and the target. Two things should be noted about the coders' selection of causal explanations. First, for many articles, the coders judged that no specific causal explanations were being made. Many articles simply reported an event (e.g., Team A defeated Team B in a soccer match) or raised awareness about an issue (e.g., water shortages are an increasingly serious problem) without going into much detail about why the event happened. Second, for a few articles, coders judged that explanations were being offered for more than one specific event. In all, attributions for 21 separate events

or outcomes from sports articles (14 from the United States, 7 from Hong Kong) and for 33 separate events or outcomes from editorials (23 from the United States, 10 from Hong Kong) were included in the analysis. These events were taken from 16 sports articles (11 from the United States, 5 from Hong Kong) and from 31 editorials (21 from the United States, 10 from Hong Kong).

RESULTS

Preliminary Considerations

Coders judged the extent to which attributions for an event were both personal and situational. Not surprisingly, there was an extremely strong negative relationship between these two ratings ($r = -.80$). A composite variable measuring overall dispositionalism was created by subtracting the situational rating from the personal rating. This dispositionalism composite was the dependent variable for all subsequent analyses. Coders' judgment of this composite had moderately high reliability (for sports articles: effective reliability¹ = .77, average intercoder correlation = .53; for editorials: effective reliability = .47, average intercoder correlation = .23).

Hypothesis Testing

We hypothesized (a) that attributions from U.S. newspapers would be more prone to dispositionalism than attributions from Hong Kong newspapers, (b) that overall differences between editorials and sports articles would be weak but that there would be a large interaction between culture and domain, and, specifically, (c) that dispositionalism would be strongest in U.S. sports articles, second strongest in U.S. editorials, third strongest in Hong Kong editorials, and least strong in Hong Kong sports articles.

The means of the dispositionalism composite across culture and domain are illustrated in Figure 3. An ANOVA showed a significant main effect of culture, $F(1, 50) = 10.86$, $p = .002$, $r = .42$. Consistent with our prediction, attributions made in the U.S. newspapers were judged to be more dispositional than those made in the Hong Kong newspapers. In both cultures, attributions made in editorials were slightly more situational than attributions in sports articles, but the main effect for domain did not reach conventional levels of significance, $F(1, 50) = 1.86$, $p = .18$, $r = .19$. The interaction between culture and domain was highly significant, $F(1, 50) = 8.61$, $p = .005$, $r = .38$.² These results provide more support for Krull's (1993) mixed model of social inference than for the original two-step inference models;³ the significant interaction between culture and domain suggests that the domain effect (difference between article type) is different in each culture. In this case, U.S. sports articles were

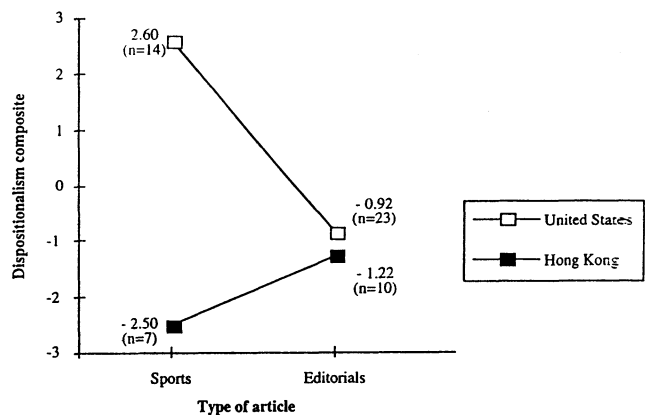


Figure 3 Dispositionalism means for U.S. and Hong Kong sports articles and editorials.

high in dispositionalism, and the extremity was attenuated in U.S. editorials. Hong Kong sports articles were high in situationalism, and again, the extremity was attenuated in Hong Kong editorials.

We further tested the specific hypothesis drawn from the mixed model of social inference that the tendency for dispositionalism would be strongest in U.S. sports articles, second strongest in U.S. editorials, third strongest in Hong Kong editorials, and weakest in Hong Kong sports articles. This hypothesis was tested with a contrast analysis (Rosenthal & Rosnow, 1985, 1991) with the following contrast weights—U.S. sports articles, +3; U.S. editorials, +1; Hong Kong editorials, -1; Hong Kong sports articles, -3. This contrast was highly significant, $F(1, 50) = 19.40$, $p = .00006$, $r = .53$.

DISCUSSION

The present study of attribution styles in sports articles and editorials from Hong Kong and the United States provides a naturalistic test of Krull's (1993) mixed model of social inference. First, our results indicate that attributions from Hong Kong are more situational and less dispositional than attributions from the United States, suggesting that culture does influence how people are initially predisposed to explain a given situation. The cultural difference in attributional style is not surprising considering extensive past research showing that attributions in Western cultures tend to be more dispositional, whereas attributions in Eastern cultures tend to be more situational (Miller, 1984; Shweder & Bourne, 1984). The present study extends the existing cross-cultural research by examining unsolicited attributions about real events that have occurred in natural settings, rather than attributions that were artificially solicited from experimental procedures. The results not only confirmed past experimental findings but also provided evidence

in support of Krull's suggestion that culture could affect the direction of the initial automatic attribution.

In addition, our results indicate that this cultural bias is weaker in editorials than in sports articles, supporting Krull's (1993) assertion that the extremity of people's initial attributions will be lessened when they are able to devote more effortful reflection to the event they are seeking to explain. The two types of articles we examined, sports and editorials, differ in a number of ways that should have consequences for the extent to which effortful correction will occur. Compared with sports articles, editorials tend to deal with content areas that are more complex, ambiguous, and amenable to multiple construals. The format of editorial opinions also allows more accountability and public scrutiny. These content and format differences between sports articles and editorials lead editorial writers to expend more cognitive effort to explaining events than sportswriters, and as a result, overdispositionalism or oversituationalism is attenuated. The results of this study specifically indicate that cognitive effort attenuates extremity in attributions, not just dispositionalism.

However, one needs to recognize that no matter how closely the differences between sports articles and editorials seem to correspond to the dimensions that affect cognitive expenditure, a naturalistic study cannot provide the definitive test of how culture and cognitive effort affect attributional processes. The naturalistic approach of the present study assures us that the artificiality and artifacts associated with experimentally soliciting attributions are diminished but does not allow us to control for all of the possible confounds. For example, to ensure comparability between the U.S. and Hong Kong articles, we carefully selected similar issues that received similar amounts of newspaper coverage during a 5-month sampling period and examined multiple issues for our analysis. However, it is possible that the cultural difference we found may be particular to the specific issues we analyzed rather than any general cultural differences in attributional style. For example, although refugees were repatriated in both Hong Kong and the United States, the historical, political, and economic backdrop of the Vietnamese refugee situation in Hong Kong is not identical to the Haitian refugee situation in the United States. Thus it is conceivable that the difference between Hong Kong and U.S. attributions may be affected by these background variables rather than by any overall cultural difference between the two countries. Also, there may be self-selection bias in who writes for the sports pages and who contributes to the editorial pages, such that the life experiences of the authors may be different for different types of articles. If the authors of the sports articles were more local and the authors of the editorials were more cosmopolitan, then it would be reasonable to expect

more heterogeneity in the attributional style in editorials than in the sports articles.

These rival hypotheses cannot be ruled out in our present study, but further research may control these artifacts and isolate some of the possible alternative explanations. For example, future research should attempt to replicate this study not only across different cultures but also with different issues or content areas within newspapers. Consistent replication of East-West differences across various issues would remove idiosyncratic political, cultural, and historical factors as possible confounds.

A possible way to control for differences in life experiences of different writers may be to compare sports articles, which objectively report games, with sports editorials, which discuss sports issues such as illegal drug use in professional sports, college recruiting policies, and so forth. Sports editorials will contain a similar level of accountability, complexity, ambiguity, and potential for multiple construals as regular editorials. Yet writers of factual sports articles and sports editorials would most probably have similar backgrounds, reducing artifacts related to writers' differences in life experiences. It may even be possible to fully control for this type of self-selection bias by comparing regular sports articles and sports editorials written by the same journalist. However, we must note that such a controlled design, although elegant, is very difficult to accomplish if the experimenters want to preserve both the naturalistic and the cross-cultural components. For example, the preliminary readings of the sports articles revealed very little overlap in the types of sporting events covered by local journalists in the Hong Kong and U.S. newspapers. Thus, although it was possible to find both sports articles as well as sports editorials about cricket in Hong Kong newspapers, and although it was possible to find sports articles and sports editorials about baseball in U.S. newspapers, we were unable to find sports articles and sport editorials covering the same sport across cultures. Recognizing that our naturalistic, nonexperimental approach cannot strive to control for all possible confounds, and recognizing the very obvious and striking difference in the extent to which personal and situational elements can contribute to performance for different sporting events, it was more important to control for the type of sporting event than to control for the self-selection bias in authorship.

Although the nonexperimental nature of the present study limits our capacity to make causal inferences between attribution style, culture, and domain, this study provides naturalistic data to complement the extensive experimental literature in both the cross-cultural attribution research literature as well as the social inference research literature. Consistent with these lines of research, we found that automatic attribution styles dif-

ferred by culture, but with cognitive effort, the extremity of the initial attributions were moderated. The convergence of past evidence gathered in the laboratory and the present evidence gathered in the field collaborates to provide strong support for Krull's (1993) mixed model of social inference.

NOTES

1. Effective reliability refers to the overall reliability of a measuring instrument (Rosenthal & Rosnow, 1991). The Spearman-Brown formula (Guilford, 1954; Rosenthal & Rosnow, 1991; Walker & Lev, 1953) was used to compute the coders' effective reliability:

$$\frac{n\bar{r}}{1 + (n - 1)\bar{r}}$$

(where n = number of coders and \bar{r} = average intercorrelation of the coders' ratings). The Spearman-Brown formula is interpreted like other measures of effective reliability, such as Cronbach's alpha and Kuder and Richardson's KR-20.

2. As predicted, the cultural difference in the pattern of attribution was extreme in the sports articles ($r = .72$) and quite small in the editorials ($r = .05$). Although there was some difference in the reliability of the coding for the sports articles and editorials, it is highly unlikely that the large Culture \times Article Type interaction could be an artifact of this differential reliability. Even after the attributions from the sports articles and editorials were corrected for the reliability with which they were measured (Guilford, 1954, Formula 14.36, p. 401), the cultural difference in the sports articles was still much more extreme (r corrected = .82) than in the editorials (r corrected = .07).

3. Although, for the most part, journalists provided causal explanations for a single event in an article, there were a few articles in which more than one event was explained. Explanations from within the same article may not be statistically independent of each other. These data also were analyzed using article as the unit of analysis. In cases in which more than one event was explained in an article, all of the ratings from that article were averaged together to create an overall composite score. The effects reported in this article are nearly identical whether event or article is the unit of analysis. The results of the ANOVA using article as the unit of analysis are reported here: main effect of culture, $F(1, 43) = 7.44, p = .009, r = .38$; main effect of article, $F(1, 43) = 2.08, p = .16, r = .21$; Culture \times Article interaction, $F(1, 43) = 6.20, p = .017, r = .36$.

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