

Exposure to Atypical Exemplars: Implications for
Stereotypic Judgments of the Group and the
Individual

Julia Grayer
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Supervised by Professor Sidney Perloe
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Research Partners:
Prachi Dave
Jane Nussbaum
Cham Santé

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Abstract

Social judgment research indicates that the direction of social judgments is dependent upon how a judge categorizes both the contextual stimuli and the target. Specifically, when a target is included in the representation of the contextual information, the target judgment will be assimilated towards the implications of the context, and vice versa. If the target is excluded from the representation of the context, the implications of the context will be contrasted away from the target, and vice versa. Exposure to a member of a stereotyped group thus affects subsequent judgments of both the group and the individual, but in opposite ways, and the direction is dependent upon whether the judge includes the individual in the stereotyped group or excludes the individual from the group. The present research builds upon these findings in three significant ways. First, unlike most previous studies, the exemplar we are examining is atypical in that it does not manifest all the expected traits associated with its group. Further, we examine not only the effect on the stereotyped group, but also the effect on the exemplar to which participants were originally exposed. Third, the contextual information is more complex than it has been in previous studies, with the intent of making such a presentation more naturalistic. The results revealed that including a well-integrated but atypical individual in, or excluding this individual from, a stereotyped group did not influence subsequent judgments of the stereotypicality of the group or of the individual. However, the order in which participants answered questions about the target (either group followed by individual, or individual followed by group), did influence judgments of stereotypicality. The factors that influence judges' categorization decisions are discussed in relation to these findings.

Introduction

The Problem

Much research in social psychology has investigated the effects of encountering an individual from a stereotyped group on subsequent judgments of either the stereotyped group or individuals from this group. Only recently, however, have researchers examined how encountering such an exemplar affects judgments of *both* the stereotyped group *and* the exemplar itself. Further, even fewer studies have examined how encountering an individual that is an *atypical* member of a stereotyped group affects these judgments. Bless, Schwarz, Bodenhausen and Thiel (2001) investigated both of

these questions. They concluded that, after encountering an atypical exemplar, opposite judgments of the stereotypicality of the group and of the atypical exemplar are formed, and the way in which the judge categorizes the atypical exemplar is the crucial determinant of the direction of this judgment. Specifically, if the judge decides that the atypical exemplar is indeed a member of the stereotyped group, the group will be judged less stereotypically, and the atypical exemplar will be judged more stereotypically, relative to a control. If the judge decides that the atypical exemplar is not a member of the stereotyped group, she will judge the group more stereotypically, and the atypical exemplar less stereotypically, again relative to a control group (Bless et al., 2001).

In the Bless et al. (2001) study, exposure to the prime was achieved by having participants listen to an audio-recorded description of the atypical exemplar. Although in everyday life people do often form judgments about groups and individuals based on oral information, visual information is often present as well. In this study we will expand upon the research of Bless et al. (2001) by creating a richer representation of the contextual information to which our participants are exposed.

Types of Judgment Processes

Overview

Before we discuss our proposed study more specifically, we will first review the major theories of judgment formation. Two types of judgment processes exist, and each judgment process differently affects the ways in which people make use of their past knowledge (the contextual information/stimuli or the standard) when forming a judgment of a new event or person (the target). The two types of judgment are comparative

judgment and interpretive judgment. When comparative judgment processes are invoked while judging a target person or event, the result is often that people's past knowledge about this person or event serves as a standard of comparison to which the new target is then compared. Alternatively, in interpretive judgment, rather than being directly compared to the contextual stimuli, the new target is understood in light of a richer representation of the contextual stimuli.

Comparative judgment is one-dimensional in nature. This means that the only judgments that can result from a comparative analysis are ones that fall along one particular range of judgment. For example, if the concept "intelligence" is activated by the contextual information, a judge can use this information to decide how intelligent the new target person is ("very intelligent," "not very intelligent," etc.). But no judgments can be made along other dimensions, such as "attractiveness." Unlike comparative judgment, interpretive judgment allows for a multidimensional analysis. That is, not only can the person in the previous example be judged in terms of his intelligence, but his attractiveness, level of honesty, etc., can also be assessed. Interpretive judgment thus involves a richer representation of the contextual information, and consequently, of the target (Eiser, 1990; Stapel & Koomen, 1998).

A second defining feature of comparative judgment is that, because the comparison emphasizes the differences between the contextual information and the target, contrast always results. Contrast can thus be defined as the phenomenon that occurs "whenever the judgment reflects a negative (inverse) relationship of the judgment and the implications of some piece of information" (Schwarz & Bless, 1992b, p. 217). For example, suppose someone has just been exposed to a photograph of an intelligent

person and is then asked to judge the intelligence of a new person. If the judge judges the new person to be less intelligent, in comparison to a person who had not been exposed to the photograph, this is a contrast effect. In interpretive judgment, on the other hand, the contextual information serves as a guide for the subsequent judgment of the target.

Sometimes this type of judgment leads to contrast. The more common result of interpretive judgment, however, is assimilation. Assimilation can thus be defined as the phenomenon that occurs when the “judgment reflects a positive (direct) relationship between the implications of some piece of information and the judgment” (Schwarz & Bless, 1992b, p. 217). That is, past knowledge about the target is incorporated into the new judgment of the target. For example, if the judge above rated the new person as being more intelligent after previously being exposed to an intelligent person (in comparison to ratings by a judge who had not seen the photograph), this is an assimilation effect. Interpretive judgments can thus lead to assimilation or contrast because the contextual information can either guide the interpretation (assimilation) or cause the judge to subtract out the implications of the contextual information from judgments of the target, which results in contrast (also called resetting). Comparative judgments, however, can only lead to contrast because changing the standard of comparison only leads to the accentuation of differences (not similarities).

Parducci’s (1963) research on the range-frequency compromise and Kahneman and Miller’s (1986) norm theory are concerned with comparative judgment. Martin’s (1986) set/reset theory, Stapel and Koomen’s (1998) interpretation/comparison model, Mussweiler’s (2003) selective accessibility theory, the inclusion/exclusion model of Schwarz and Bless (1990, 1992a, 1992b), and Bless, Schwarz, Bodenhausen and Thiel’s

(2001) expansion of the inclusion/exclusion model to include atypical exemplars, are the main theories on interpretive judgment.

In summary, the main differences between the two types of judgment are that in interpretive judgment, the judge forms a more complex, multidimensional mental representation of the contextual information in light of which an understanding of the target will be formed. In comparative judgment, all judgments are made along a single continuum or dimension. Further, interpretive judgments can result in both contrast and assimilation, whereas in comparative judgment, only contrast is possible. It should be noted that although multiple theories on interpretive judgment exist, all capture some aspect of the process. Many overlap and build off of each other, and all present some new insights into social judgment, but no theory presented here is intended to disprove any other theory discussed.

Comparative Judgment

The Range-Frequency Compromise, Parducci. One of the first theorists to understand comparative judgment in ways that it is still understood today was Allen Parducci (1963, 1984). Parducci (1963, 1984), using weight studies for support, found that the range and the frequency of past contextual stimuli, represented as the midpoint and the median of the contextual range, respectively, constituted the standard in relation to which a new stimulus was judged.

Parducci (1963, 1984) studied judgments of happiness to expand the range-frequency compromise model. Because Parducci (1963, 1984) thought that all judgments are affected by both the range and the frequency of other similar stimuli, he contended

that the presence of other events in one's life impinges on the degree of pleasure that one garners from a particular event. Past events thus constitute the context to which new judgments of happiness are compared. For instance, if a person experiences an extremely sad event, any subsequent experience is likely to be judged as pleasurable. Similarly, if someone experiences a particularly happy event, such as a delicious meal, other events within that same context (dinner the next night) will likely seem paltry in comparison (Parducci, 1984). Judgments of happiness thus cannot be made in isolation.

In addition to the position that the current event falls within the series, or range, of other events, the frequency that the event in question occurs also influences how the person judges the event. As Parducci (1984) explains, once a very happy event, such as being given a raise, is experienced, all subsequent events will elicit less happiness in that person, because they will be compared to this one happy event. And because an event such as a raise usually does not occur often, eventually the individual's overall happiness will decrease because future events will forever be compared with the rare but wonderful time that a raise was given. Parducci (1984) concludes that in order to counteract the potentially negative side effects of a happy event, the event needs to be experienced often: "to achieve the highest possible level of happiness, the highest values must be experienced relatively frequently" (Parducci, 1984, p. 13). An event such as being given a raise is inherently infrequent, but other satisfying events, such as the previous example of a good meal, need to be repeated frequently, according to Parducci's (1984) theorem, in order to provide long-term happiness.

In the same vein, Parducci's (1984) theory also calls for the correct balance of negative life events: "when the worst is really a misfortune is when it is experienced too

frequently, that is, more frequently than the bare minimum needed to keep it within the context” (Parducci, 1984, p. 15). In other words, a negative event needs to be experienced frequently enough for people to be able to appreciate the non-negative events in their lives. But a negative event should not be experienced so frequently that it “skews the distribution of experiences back in the unhappy direction” (Parducci, 1984, pp. 15, 16).

Parducci’s (1984) theory can be applied to other subjective judgments of events. All judgments are contingent upon both the event’s positioning relative to other events on the judgment scale (range), and the frequency with which the events in question occur. Because the context surrounding the event in question always serves as a reference point when an individual forms a judgment of the event, contrast effects always result. The resulting judgments also still fall along the same dimension as that of the contextual stimuli. In terms of the happiness dimension, for instance, a new stimulus is judged to elicit either more happiness or less happiness than the standard to which it is being compared.

The phenomena of assimilation and of forming multidimensional judgments of a target are thus still not accounted for by Parducci’s (1963, 1984) theory. Kahneman and Miller’s (1986) norm theory expands upon Parducci’s (1963, 1984) theory by examining more closely judges’ mental representations of contextual stimuli, but norm theory still does not account for assimilation effects.

Norm Theory, Kahneman and Miller. In norm theory, the judge compares the newly encountered target to a composite of remembered and constructed contextual

stimuli, which serve as the norm, or “frame of reference” (standard of comparison) (Kahneman & Miller, 136). Specifically, the newly encountered target person or event can function as a “‘probe’ that can lead to the retrieval from memory of particular ‘elements’ or exemplars of a similar stimulus category” (Eiser, 1990, p. 24). That is, the target brings to mind other relevant contextual stimuli, which will add to the representation of the norm to which the target will be compared, with the most accessible information being more readily retrieved. Further, norm theory maintains that people do more than just compare the current event or person with one that they have recently experienced or encountered. Instead, people “define their own standards and frames of reference” (Eiser, 1990, p. 23), whereby they construct their own personal framework with which they compare a new target. Both memory for actual past events and “imagined alternatives” serve as the basis for this construction (Eiser, 1990, p. 24).

Norm theory is thus significant because, by allowing for the construction of alternative standards, a richer representation of the standard results. However, the standard is not yet complex enough to allow for the production of multidimensional judgments of the target person or event. Neither is norm theory concerned with predicting the direction of the judgment (assimilation or contrast). We will next turn to interpretive judgment, which accounts for both multidirectional and multidimensional judgments.

Interpretive Judgment

Set/Reset, Martin. In the mid 1980’s, Martin (1986) developed the set/reset model as an explanation for when impression formation results in contrast and when it

results in assimilation: “According to the set/reset model, individuals seek information that appears appropriate (or at least not inappropriate) to their current processing objectives” (Martin & Achee, 1992, p. 200). That is, when a person is asked to judge a target, he will try to base this judgment solely upon the traits of the target (appropriate traits), and not on outside factors (inappropriate traits). When a judge is “aware”¹ that he is being influenced by contextual information, he will make an effort to negate or correct for this influence. For example, if the context surrounding an ambiguous target is blatantly positive, and the participant is asked to judge this target, he will judge it as being negative in an attempt to counteract the predicted influence of the background information. A contrast effect results, and Martin (1986) termed this process of bias correction “resetting” (Martin, Seta & Crelia, 1990, p. 28). Alternatively, if the judge is not aware that he is being influenced by background information, there will be no reason to engage in resetting. This is because he believes that his judgment of the target is a result of the influences of, and only of, the target, and not of any factors outside of the target. This process is termed “set”, and it results in the judge assimilating the target to the implications of the contextual information (Martin, 1986, p. 495). Specifically,

Set refers to the use of a contextually activated response during the formation of the target impression, whereas reset refers to the suppressed use of the contextually activated response and the generation of a context-distinct response for the target.

(Martin, 1986, p. 459)

To test his hypothesis that contrast will result if judges are aware of the influence of the context, and assimilation will result if judges are unaware of the influence of the context, Martin (1986) employed a “task interruption” procedure (Martin, 1986, p. 495),

¹ People are not necessarily conscious that they are being influenced. Instead, resetting “could be automatically cued” (Martin & Tesser, 1998, p. 7).

whereby he manipulated whether or not participants were allowed to complete a categorization task. His rationale for including an interruption condition in his study was based on prior research indicating that “individuals are more likely to continue thinking about a goal when that goal has not been met than when it has been met” (Martin, 1986, p. 495). He therefore hypothesized that participants who felt they had not completed their task would keep the task in mind when forming judgments of a target, but that participants who thought that they had completed the task would not continue thinking about the task when making subsequent judgments. In relation to the set/reset model, Martin (1986) hypothesized that, because participants in the interruption condition would continue to think about the concepts that were activated during the categorization task, they would be unable to push aside these concepts when judging a target and these concepts would thus influence participants’ judgments. Alternatively, Martin (1986) predicted that participants in the completion condition would be able to avert reliance on the activated concepts and thus they would “generate a context-distinct response” when asked to form a judgment of an ambiguous target (p. 497).

Martin (1986) divided his participants into either an “interrupted-task condition” or a “completed-task condition” (p. 496). In reality, all participants completed the same number of categorization tasks (four), but half of the participants (the interrupted-task condition) were under the impression that they were supposed to complete eight tasks. In each of the task-completion conditions, half of the participants completed tasks designed to elicit positive concepts, such as “boldness” or “self-assurance.” The other half of the participants completed tasks designed to elicit negative concepts, such as “foolhardiness” or “egotism” (Martin, 1986, p. 496). The categorization exercise thus served as a prime,

activating either positive or negative contextual information. After completing a number of distracter tasks, the participants were presented with the target, which was a paragraph describing the ambiguous behaviors of “Donald” (Martin, 1986, p. 496). Using a 7-point, negative to positive scale, participants then judged the target on a number of traits provided by the experimenter (Martin, 1986).

Martin (1986) hypothesized that participants in the completion condition would exhibit a contrast effect when judging the target, and that participants in the interruption condition would exhibit an assimilation effect. Specifically, because it has been shown that people stop thinking about a task after they believe they have completed it, Martin (1986) predicted that participants who thought that they had completed the categorization task in its entirety would form a negative impression of Donald when the categorization task primed positive trait words, and that they would form positive impressions of Donald when they were primed with negative trait words. Conversely, Martin (1986) predicted that participants in the interruption condition, because they would continue thinking about their task and thus be unable to avoid these thoughts affecting their target judgments, would form positive judgments of Donald after being primed with positive trait words during the categorization task, and that they would judge Donald negatively after being primed with negative words.

The results confirmed Martin’s (1986) hypothesis. These results are significant because assimilation, not just contrast, resulted. Specifically, the fact that the same contextual information (the prime) was made equally accessible to both the interruption and the completion condition, but different impressions were formed by each group, indicates that the *same* contextual information can lead to either contrast *or* assimilation:

[E]ither assimilation or contrast can occur between a given stimulus and a given applicable target depending on whether individuals are prompted into bringing or not bringing their contextually activated reactions (e.g., concepts) to bear in forming target impression.

(Martin, 1986, p. 503)

These results suggest that whether assimilation or contrast results when an individual judges a target is not simply dependent on the accessibility of the contextual information (Martin & Achee, 1992). The appropriateness of the contextual information is also a factor. Specifically, “any factor that makes information inconsistent with the processing objective increases the chances that subjects will not use that information” (Martin & Achee, 1992, p. 203). The contrast effects exhibited by the reset model are therefore not the result of the same process that produces contrast in comparative judgment. Contrast in comparative judgment is the result of direct comparison between the target and a standard, whereas resetting involves discounting contextual information from the judgment of the target. This latter type of contrast is called subtraction (Schwarz & Bless, 1992b).

Martin’s (1986) model not only accounts for assimilation by allowing the contextual information to act as an interpretive guide, instead of a standard of comparison, to which the target is compared, but it also maintains that people’s mental representations of the target and context are rich enough to allow for multidimensional judgments about the target. While the earlier researchers were only interested in judgments that could be made along a single dimension, the set/reset model accounts for more complex mental representations of the contextual stimuli and thus more complex judgments. For instance, in Martin’s (1986) study, participants were asked to judge the same target on many different dimensions, which were “reckless/adventurous,

conceited/self-confident, dishonest/honest, and crude/polite” (p. 496). The multidimensional nature of interpretive judgment is key to our study, where participants are asked to rate the individual and the group on more than one trait category.

Stapel and Koomen’s (1998) interpretation/comparison model complements and expands the set/reset model by examining more closely the criteria, in addition to the appropriateness of the contextual information, that factors into judgment formation.

Interpretation/Comparison Model, Stapel and Koomen. Stapel and Koomen (1998) developed the interpretation/comparison model in an effort to compensate for the shortcomings that they felt were inherent in previous models of assimilation and contrast. Two aspects of contrast and assimilation that they felt were over-emphasized in previous models were extremity and appropriateness. The role of appropriateness in judgment formation was tested in Martin’s (1986) set/reset experiment, where contextual information that was deemed “inappropriate” (Martin & Achee, 1992, p. 200) to the target resulted in contrast, and appropriate information lead to assimilation.

Stapel and Koomen (1998) also admit that evidence exists for the influence of the extremity of contextual information in judgments. Herr (1986) studied the effects of extremity on target judgments:

Herr found that an ambiguous target person (friendly/hostile Donald) was judged as *hostile* when extremely friendly exemplars (e.g., Ghandi) were primed- a contrast effect. When context information was moderately extreme, assimilation was more likely: Donald was judged as relatively friendly when moderately friendly exemplars (e.g., Robin Hood) were primed.

(Stapel & Koomen, 1998, p. 238)

Herr (1986) reasoned that when the context was more extreme, participants were less likely to perceive the target as being in the same category as the context, and thus the

traits of the background information were less likely to influence the target judgment. However, when the contextual stimulus was less extreme, participants were more likely to perceive the exemplar (in this case, the contextual information) and the target as belonging to the same category, thus increasing the chances that a participant's judgment of the context would influence his judgment of the target. Extremity therefore plays a role in judgment formation by influencing whether or not a target will be included in or excluded from a given category, and such categorization decisions influence whether assimilation or contrast will result.

Although Stapel and Koomen (1998) acknowledge the role of the aforementioned factors, they “suggest that above and beyond the effects of extremity and appropriateness,” the variables included in their interpretation/comparison model “may determine whether assimilation or contrast will occur” (p. 246). They begin by discussing the variables that lead to assimilation, and the first such variable included in their model is the ambiguity of the target:

Obviously accessible information is only a guide to interpretation when there is something to be interpreted – that is, when the target stimulus is ambiguous rather than unambiguous.

(Stapel & Koomen, p. 240)

In other words, when a target is unambiguous, individuals already have enough information about the target and do not need to rely on the contextual information. On the other hand, when a target is ambiguous, individuals are more likely to rely on contextual information to disambiguate the target.

Stapel and Koomen (1998) next discuss “interpretation relevance” (p. 240). By this they mean that in order for the context to have an effect on a target, the judge must perceive the contextual information to be “applicable to the interpretation of the target”

(Stapel & Koomen, 1998, p. 240). For instance, if asked to judge an ambiguous statement such as “She never changes her mind,” being primed with “stubborn” will have more of an effect on the judgment than will being primed with an inapplicable target such as “adventurous” (Stapel & Koomen, 1998, p. 240).

However, even when interpretation relevance and target ambiguity are considered, questions still remain as to when contrast versus assimilation will result from judgments. As Stapel and Koomen (1998) explain, in Herr’s (1986) extremity experiment, even when a target (Donald) was interpretively relevant to the context (Ghandi), contrast sometimes resulted. Convinced that other factors must influence judgment, the researchers next examine distinctiveness. Stapel and Koomen (1998) predict that, the more distinct the contextual stimulus, the more likely that it will lead to contrast. This is because “when an object is explicitly evaluated or judged, associated attribute information is clearly connected and confined to this object” (Stapel & Koomen, 1998, p. 241). In other words, when individuals encounter distinct contextual stimuli, the traits associated with the contextual stimulus are seemingly inherent to it and so judges are less likely to extend those traits to other people or events (the target). Distinct primes that are commonly employed in social judgment research are person exemplars, such as “Hitler” and “Marilyn Monroe” (Stapel & Koomen, 1998, p. 240).

Contextual stimuli that are not distinct tend to have the opposite effect on judgments; that is, non-distinct contextual stimuli commonly result in assimilation (Stapel & Koomen, 1998). Stapel and Koomen (1998) explain this phenomenon: “An abstract trait concept or attribute with no clear object boundaries lacks the distinctness to be used as a comparison standard” (p. 240). Because the traits that are activated by

contextual information are not intrinsically linked to any specific person or event, the judge uses the context to interpret the target. Examples of non-distinct, or diffuse, stimuli that serve as contextual stimuli in social judgment studies are “adventurous”, “reckless”, “persistent”, and “stubborn” (Stapel & Koomen, p. 240).

In addition to the distinctiveness of the contextual stimuli, “comparison relevance” is also key to the interpretation/comparison model (Stapel & Koomen, 1998, p. 241). Comparison relevance refers to the degree to which a target and a contextual stimulus are seen by a judge to be members of the same category. For instance, if a person is judging the hostility of Donald, first being primed with “Shark” (Stapel & Koomen, 1998, p. 241) will have less of a comparative effect than being primed with “Hitler.” This is because Hitler and Donald belong to the same category (person).

“Shark” and Donald, on the other hand, belong to separate categories:

These exemplars are not similar, do not belong to the same target category (persons), and thus lack comparison relevance that makes contrast unlikely to emerge.

(Stapel & Koomen, 1998, p. 241)

Person exemplars are more likely to lead to contrast when being compared to a person target because they are similar enough for the judge to compare the two. On the other hand, traits, being less similar to any specific target, are less likely to be compared with the target. Instead, trait concepts often lead to assimilation (Stapel & Koomen, 1998). While it is easy to confuse comparison relevance with appropriateness, the latter is more concerned with the specific conditions that lead a judge to subtract contextual information from target judgments, whereas comparison relevance refers to category membership more broadly. Thus, even though a given target and a contextual stimulus

might be judged to belong to the same category, the judge may still decide that it is not appropriate to judge the target in light of the context.

Stapel and Koomen's (1998) research therefore provides a model for when both assimilation and contrast effects will result from social judgment. Specifically, the presence of an ambiguous target, non-distinct contextual stimuli, and interpretive relevance between the target and the contextual stimuli all increase the likelihood that the contextual information will serve as an interpretive framework during judgment of the target, and that assimilation will result. The likelihood of a contrast effect is increased when the target is not ambiguous, the contextual stimuli are distinct, and comparative relevance exists between the target and the contextual stimuli. And, consistent with previous models, the appropriateness of the contextual information and the extremity of the context and the target are also considered by this model.

All of the models thus far have focused on how accessible knowledge influences judgment formation. The next model discussed takes a step back and examines "the mechanisms that underlie the activation of target knowledge during a comparison" (Mussweiler, 2003, p. 483). Even though Mussweiler (2003) focuses on a different stage of the judgment formation process, it is still complementary to the models previously discussed.

Selective Accessibility, Mussweiler. The selective accessibility model developed by Mussweiler (2003) focuses on category membership as the ultimate determinant of the judgment direction. According to Mussweiler (2003), interpretive judgments are the result of a three-stage process: standard selection, comparison, and evaluation.

Mussweiler (2003) considers the second stage of this process to be most important, and he therefore developed the selective accessibility model to explain what is involved in the comparison stage.

Like all of the past theorists, Mussweiler (2003) recognizes that judgments are relative. A judgment cannot be made about a target unless that target is compared with a standard. For instance, Mussweiler (2003) explains that if someone is asked to rate her athletic ability, she will first have to select a standard, such as a friend or a professional athlete, with which to compare herself. Factors such as accessibility of the standard and similarity of the standard to the target influence which standard is chosen for comparison. According to Mussweiler (2003), choosing a standard with which to compare the target thus constitutes the first stage of judgment formation.

In the next stage, the judge determines the “featural focus” of the comparison (Mussweiler, 2003, p. 474). That is, the judge must decide “on which particular features of the standard and the target the comparison is to be based” (Mussweiler, 2003, p. 474). According to Mussweiler (2003), this stage is critical because the features that are emphasized in this comparison will guide the subsequent target judgment. Returning to the athlete example, she must decide which aspects of this general category she will use to judge her athletic ability. For instance, she can decide that she will compare her speed with her friend’s speed. Alternatively, she could decide, instead of comparing speed, to compare endurance. After the features to focus on have been established, the judge next compares these selected features. That is, she decides whether or not she has more endurance than her friend does, or if, on the other hand, her friend has more endurance

than she does. Mussweiler (2003) contends that this comparison, although of critical importance, has received relatively little focus in social judgment research.

In the final stage (evaluation), the judge forms a judgment based on these comparative features. As Mussweiler (2003) explains,

the basic assumption is that by default accessible knowledge is used as a basis for subsequent target judgments. As a consequence, target evaluations are typically consistent with the implications of accessible knowledge.

(p. 474)

In other words, accessible knowledge is commonly assimilated to a judge's judgment of a target. Continuing with the athlete example, Mussweiler (2003) predicts that if "comparing your athletic abilities to those of a friend primarily brings to mind instances of poor performance, you are likely to evaluate yourself as relatively unathletic" (p. 474).

This last stage thus finalizes the judgment process, but according to Mussweiler (2003), the second, comparative stage is the most critical in determining this final outcome. Mussweiler (2003) developed the selective accessibility model to expand upon the process involved in the target-comparison stage. According to this model, the first step of comparison (which is the second stage of judgment formation) involves the judge making "a quick holistic assessment of the target and the standard" (Mussweiler, 2003, p. 475). That is, the initial comparison process consists of the judge first making a general overall appraisal of the similarity between the target and the standard. Considerations such as extremity, appropriateness, and ambiguity, as discussed by previous theorists, influence this decision.

The second step relies on this preliminary comparison. If the judge concludes from this comparison that the target and the standard are similar to each other, she will then engage in similarity hypothesis testing. Alternatively, if she determines that the

target and the standard are not similar to each other, she will engage in dissimilarity hypothesis testing (Mussweiler, 2003). In other words, if this initial holistic assessment readies the judge to see the target and the standard as being similar, she will actively search for information in the target that will confirm her hypothesis that the target and standard are similar. She will thus conclude from this targeted search that yes, indeed, the two are similar, and assimilation will result. On the other hand, if the initial assessment leads the judge to perceive the target and the standard as being dissimilar, she will actively search for information in the target that confirms this hypothesis. When she is convinced that the two are sufficiently dissimilar, she will contrast the target from the standard when making her final judgment of the target (Mussweiler, 2003).

This is the factor that we will be manipulating in our study. That is, by asking the participants a leading question, we expect to induce them to focus on specific features and engage in either similarity or dissimilarity hypothesis testing when making their subsequent comparisons between the target and the standard. Mussweiler's (2003) model therefore specifies more clearly what knowledge about the target will be used in judgment formation.

Inclusion and Exclusion, Schwarz and Bless. In the vein of Mussweiler (2003), Schwarz and Bless (1992b) maintain that categorization is at the heart of understanding assimilation and contrast. Specifically, they assert that whether or not contextual stimuli are assimilated towards or contrasted away from a target is contingent upon how the judge categorizes this information. Schwarz and Bless (1992b) hypothesize that if the judge sees the target as being included in the representation that he holds of the

contextual stimuli, the target will be assimilated towards the contextual stimuli. The traits associated with the contextual stimulus will thus influence the judgment that the judge makes concerning the target, and vice versa. This condition is called inclusion. Conversely, when the target is not perceived to be a full member of the activated category, contrast will result. That is, the traits that the judge perceives as intrinsic to the contextual information will be contrasted away from the subsequent appraisal of the target (Schwarz & Bless, 1992b). It should be noted that even though the target is not fully included in the category, it is, however, still relevant to the category and category-relevant features can still exert influence over target judgments. This condition is called exclusion.

Schwarz and Bless (1990) tested their assumption that the inclusion of a target in a category or exclusion of a target from a category determines whether assimilation or contrast will result. Their study involved manipulating whether or not participants included or excluded a well-respected politician in or from a political party. Specifically, half of the participants were asked a question designed to induce the inclusion of Richard von Weizsacker, “One of the most highly regarded members of the Christian Democratic Party,” in their representation of the Christian Democratic Party (Schwarz & Bless, p. 222). In the exclusion condition, participants were asked a question designed to exclude von Weizsacker from their representation of the Christian Democratic Party. For the dependent variable, participants were asked to form judgments about the Christian Democratic Party (1990, 1992b).

The researchers predicted that when participants were induced to include the highly respected von Weizsacker in the Christian Democratic Party, their judgments of

the party would become more positive (in comparison with a control group, which was neither induced to include the prime in, nor exclude the prime from, the representation of the target). Schwarz and Bless (1990) thought this would be the case because if the participants were induced to include von Weizsacker in their representation of the party in general, the characteristics of von Weizsacker would have to be included in the representation of the group. And since von Weizsacker's traits are positive, judgments of the group to which he belongs (the Christian Democratic Party) would be assimilated towards this positivity. These results were indeed found:

If Richard von Weizsacker was assigned to the target category, that is, the Christian Democrats... he was included in the data base considered in making the general judgment [of the party].

(Schwarz & Bless 1990, p. 223)

Alternatively, when the participants were induced to exclude von Weizsacker from their representation of the party, a contrast result was expected. This hypothesis was confirmed, as participants' judgments of the party were decreased (in comparison to the control) (Schwarz & Bless, 1990).

In a further study, Schwarz and Bless (1992a) examined judgments of both the group and of individuals from the group (but not the exemplar that was presented as contextual information). In one condition, participants were asked to recall the names of politicians who were involved in the Barschel Scandal in Germany, "which bears some resemblance to the Watergate scandal in the United States" (Schwarz & Bless, 1992a, p. 574). The dependent variables were participants' judgments of both the trustworthiness of German politicians in general, and the trustworthiness of specific German politicians who were not associated with the scandal (Schwarz & Bless, 1992a). Participants in a second group, the control, were also asked to recall the names of politicians involved in

the scandal, but not until after the dependent variables were measured (Schwarz & Bless, 1992a).

Schwarz and Bless (1992a) predicted that whether or not the participants were asked to generate the names of politicians involved in the scandal before or after they made their judgments would influence the direction that these judgments took. Specifically, they hypothesized that, when making judgments of politicians in general, the participants who were first asked to name specific politicians involved in the scandal would produce negative judgments of the group (assimilation). Schwarz and Bless (1992a) were correct in their prediction that assimilation would result under these circumstances:

This assimilation effect presumably reflects that subjects included the politicians who were involved in the scandal in their representation of German politicians in general.

(Schwarz & Bless, 1992b, p. 226)

Alternatively, Schwarz and Bless (1992a) predicted that participants in this same condition (who were asked to recall the names of specific politicians involved in the Barschel scandal before judging the target) would exhibit more positive judgments of the trustworthiness of individual politicians who were not involved in the scandal, relative to the control group. Their hypothesis was again confirmed. Schwarz and Bless (1992b) explained this contrast effect in the following way: “the subjects used the easily accessible politicians who were involved in the scandal in constructing a standard of comparison” (p. 226).

After conducting and examining these and other studies concerning judgment, Schwarz and Bless (1992b) reviewed a number of factors presumed to play a role in

bringing about either inclusion or exclusion of contextual information in or from the representation of a target. The first factor that the researchers discuss is representativeness: “Information that is not representative for the target category is likely to be excluded, and is therefore likely to result in contrast effects” (Schwarz & Bless, 1992b, p. 229). Thus, if the contextual information does not embody enough traits to make this information pertinent to the target, this information will be contrasted with the target. On the other hand, if the information is relevant to the category, assimilation will result.

The degree of overlap between the features of the context and those of the target influences assessments of representativeness. A study by Herr, Sherman, and Fazio (1983) supported this hypothesis. In this experiment, some participants were exposed to a moderate prime and others were exposed to an extreme prime. Both then rated an ambiguous target. The researchers found that participants in the moderate condition exhibited an assimilation effect, whereas those in the extreme condition exhibited a contrast effect. The authors reasoned that, because there were more features common to both the moderate prime and the ambiguous target, the target was seen as a member of the activated target category (inclusion). On the other hand, when the prime was more extreme, fewer of its features were shared with the target. Exclusion, and therefore contrast, thus ensued (Herr et al., 1983).

The width of the category also influences the inclusion or exclusion of context information. As Schwarz and Bless (1992b) point out, the influence of this factor was apparent in their (1992a) study of political trust. This study therefore shows that the “wider a category is, the more likely it becomes that a given piece of information may be

included” in the category (Schwarz & Bless, 1992b, p. 232). In the Schwarz and Bless study (1992a), priming with a corrupt politician activated in the participants the stereotype that politicians are corrupt. When this context information was compared with a group of politicians, the stereotype elicited by the prime was assimilated towards that of the group. This is because both the target and the prime (the contextual information) were perceived as being members of the same group (politicians). On the other hand,

thinking about an individual should be likely to result in contrast effects on the evaluation of other individuals, reflecting that an individual person is likely to make up a category by him- or herself, constituting an exclusion relationship.
(Schwarz & Bless, 1992b, p. 232)

In other words, thinking about a well-defined exemplar essentially entails placing this exemplar into a category of its own, thus excluding it from the target category (Schwarz & Bless, 1992b).

The final factor that Schwarz and Bless (1992b) discuss as an influence in the judgment of whether a target is included in or excluded from the contextual stimuli is whether or not participants are aware of the influence of the contextual stimuli. This process (set/reset) was already discussed in relation to Martin’s (1986) study, and again in the interpretation/comparison model (referred to as appropriateness). As should now be apparent, inclusion or exclusion is contingent upon a number of factors, namely the representativeness of the target and the contextual stimuli, feature overlap, the category width, and the suppression of contextual information that is judged to be extraneous (resetting) (Schwarz & Bless, 1992b). Schwarz and Bless (1992a) also found that, when a negatively stereotyped individual is included in the representation of a group, opposite judgments are formed of the group and of individuals from that group. Schwarz, Bless, Bodenhausen and Thiel (2001) expand on the inclusion/exclusion model by examining

the effect of inclusion and exclusion on both the group and on the individual that served as the contextual stimulus.

Inclusion and Exclusion and Atypical Exemplars: A Trade-Off, Schwarz, Bless, Bodenhausen and Thiel. The 1992a study by Schwarz and Bless revealed that whether or not the target is an individual or a group affects the direction of the subsequent judgment. Specifically, Schwarz and Bless (1992a) concluded that when people are exposed to extremely negative individuals from a negatively stereotyped group, because the individuals are included in their representation of the group, the judgments of the group are assimilated towards the negative implications of these individuals. The group is thus seen more negatively. On the other hand, when people judge specific individuals belonging to the same stereotyped group (but not the same individuals that were presented as contextual stimuli), the contextual stimuli are not included in participants' representations of the target, and the participants contrast the implications of the context with that of the new individuals. The result is that the target individuals are judged more positively.

Bless, Schwarz, Bodenhausen and Thiel (2001) sought to expand the application of the inclusion/exclusion model by examining the effect of exposure to an individual from a stereotyped group on subsequent judgments of both that group and of the original individual encountered. This is different from the conditions in the Barschel study conducted by Schwarz and Bless (1992a), because, in that study, while the target individuals and the target group were both politicians, the individual politicians that were judged were not the same individual politicians that served as the contextual stimuli.

The Bless et al. (2001) is also innovative in that the exemplar is atypical. The effect of encountering an atypical exemplar from a stereotyped group is an important question, since people that we encounter in daily life often do not fit easily into one category or another (i.e., “a generous and scrupulously ethical used car salesman” (Bless et al., 2001, p. 386)). We often use contextual information (e.g., comments from a friend) when making categorization decisions. These categorization decisions greatly affect ensuing judgments of stereotypicality.

Bless et al. (2001) explored these questions using the negatively stereotyped Roma and Sinti, a gypsy group that is widely discriminated against in Germany, where the study was conducted. Participants listened to an audio recording favorably describing a moderately atypical member of this group and then answered a question designed to either elicit inclusion of the exemplar in the group or exclusion of the exemplar from the group. In the inclusion condition, participants were asked how well integrated the exemplar was into the category. Given four options, they were expected to select “very well integrated” or “well integrated.” In the exclusion condition, participants were asked to select which category best describes the exemplar from the choices provided. Participants were expected to choose “Rom, but an exception” (Bless et al., 2001, p. 390). A third group, the control, was asked a neutral question, unrelated to the target. The dependent variable was participants’ judgments of the stereotypicality of both the exemplar and the group.

As predicted, Bless et al. (2001) found an assimilation effect when the atypical exemplar was included in the representation of the group. Furthermore, a contrast effect resulted when the same exemplar was excluded from the group. Specifically, when

participants were prompted to categorize the exemplar as a well-integrated member of the Roma and Sinti, the group was judged less stereotypically relative to the control condition. As well, the exemplar was judged more stereotypically by participants in the inclusion condition than by those in the control condition.

Bless et al. (2001) asserted that “Both of these assimilation effects are presumably based on changes in the representation formed of the respective target of judgment” (p. 391). In other words, when the exemplar was included in the group category, judgments of the exemplar were assimilated towards the implications of the negatively stereotyped group, resulting in a negative judgment of the exemplar (relative to the control). As well, the judgments of the group were assimilated towards the implications of the exemplar, resulting in a positive judgment of the group (relative to the control). Assimilation effects thus occurred because the context increased participants’ readiness to view the exemplar as representative of the category (Bless et al., 2001).

In the exclusion condition, positive traits associated with the exemplar were compared to and thus contrasted with negative traits ascribed to the group; similarly, the negative traits associated with the group were contrasted with the positive traits of the exemplar.

The above research has shown that the categorization of a moderately atypical exemplar as either within or without a group affects, in opposite ways, subsequent judgments of both the group and the exemplar. A “trade-off” (Bless et al., 2001, p. 389) thus exists in that encountering a person from a group who does not exhibit some of the stereotypic qualities of that group can lessen subsequent stereotypic judgments of the

group, but at the same time, these conditions can increase the presumed stereotypicality of that individual (and vice versa).

Summary

As can be seen by examining the previous research on judgment formation, numerous circumstances influence a person's final judgment of a target. The majority of the theorists have agreed that the way in which the target and the contextual information are categorized is an important determinant of the ultimate judgment of the target. Many factors, such as feature overlap, appropriateness, extremity, comparative relevance, interpretive relevance, representativeness, category width, ambiguity, and distinctiveness determine category assignment. The way these pieces of information are categorized then influences the judge's decision as to what kind of effect one piece of information will have on the other. Specifically, if a target is included in the judge's representation of the contextual information, assimilation will result. If the target is excluded from the judge's representation of the context, contrast will result. The following is a brief summary of the theories discussed.

- Parducci (1963, 1984): set forth the accepted theory of comparative judgment, which states that the range and the frequency of past contextual stimuli constitute the standard of comparison to which new information is compared. Given the comparative nature of this process, only contrast can result.
- Kahneman and Miller (1986): accounted for the occurrence of, and the processes behind, judges' complex mental representation of standards.
- Martin (1986): accounted for the occurrence of multidimensional judgments that can lead to both contrast and assimilation.

- Stapel and Koomen (1998): accounted for the influence of appropriateness, extremity, ambiguity, interpretive relevance, distinctiveness and comparative relevance on the production of assimilation and contrast effects.
- Mussweiler (2003): further explained the process that determines what information about the target will be used in judgment formation.
- Schwarz and Bless (1990, 1992a, 1992b): determined that inclusion leads to assimilation while exclusion leads to contrast.
- Schwarz, Bless and Thiel (2001): determined that encountering atypical exemplars differently affects judgments of the group and judgments of the exemplar.

This research on the assimilation and contrast effects of including an exemplar in and excluding an exemplar from a category has important implications about stereotyping. That is, people's categorization decisions strongly influence stereotypic judgments of the groups and individuals from those groups that are encountered in everyday life. In Schwarz and Bless' (1990, 1992a, 1992b) studies, information about stereotyped groups and exemplars was presented to participants orally. In day to day life, individuals make judgments based on more than just what they hear. Oral information is usually supplemented by visual information, and individuals utilize both of these contextual cues when judging other people. We propose to extend the findings of Bless et al. (2001) by conducting a methodologically similar study using a different stereotyped group and, more importantly, a presentation of contextual information that allows participants to make use of both auditory and visual modalities. Further, we will have participants judge both the group and the atypical exemplar that was previously presented as part of the contextual information. In this way, we will be able to observe how exposure to an atypical exemplar affects judgments of that exemplar and of his group.

Consistent with Mussweiler's (2003) selective accessibility model, by manipulating the context in which a judge is exposed to a target, we intend to manipulate the judge's direction of hypothesis testing, which will most likely influence his judgment of the target. In choosing the standard and target for the present study, we have also considered the work of Martin (1986), Stapel and Koomen (1998), and Schwarz and Bless (1990, 1992b). That is, an effort was made to choose a standard that was representative of, and appropriately, interpretively and comparatively relevant to, the target.

Hypothesis

We hypothesize that the participants who are induced to categorize the atypical exemplar as very well or well integrated into her population (the inclusion condition) will rate the group less stereotypically, and the exemplar more stereotypically, relative to the control. Alternatively, participants who are induced to categorize the atypical exemplar as being an exception to her group (the exclusion condition) will rate the group more stereotypically, and the exemplar less stereotypically, relative to the control. The participants in the inclusion condition are therefore expected to show assimilation effects whereas the participants in the exclusion condition are expected to show contrast effects.

Method

Participants

One hundred and forty five students (80 males, 65 females) from Haverford and Bryn Mawr colleges participated in the study, with an average age of 20.5 (*S.D.* = 1.35).

The racial breakdown² of the participants was 117 Caucasians, 10 Asians, four African Americans, three Hispanics, and nine “other.” Participants were recruited in two ways: 1) experimenters asked their friends and teammates to participate (these students were not tested by the experimenter that recruited them to avoid friends being tested by friends) and 2) by emailing or telephoning every fifth person from the Haverford student directory. For their participation, all participants were entered into a lottery where they could win one of three fifty-dollar prizes.

*Design*³

Our study follows the model of Bless et al. (2001). It is a mixed factorial design: 3 (condition: inclusion, exclusion and control) x 2 (target: judgment of the exemplar vs. group) x 2⁴ (order of questions: group questions followed by exemplar questions, or vice versa) x 2 (gender: male or female) x 4 (experimenter: Prachi Dave, Julia Grayer, Jane Nussbaum, or Cham Santé).

Procedure

The experiment focused on stereotypes of the elderly. Information about an atypical category exemplar was presented to participants through a series of film clips (12 minutes long) documenting everyday actions of the atypical exemplar. The participants were told that the experimenters were interested in understanding how people interpret video clips that depict realistic people and events. The film was “Never Too Late”

² Two participants chose not to indicate their race.

³ We were originally intending to run a second study examining African American stereotypes, but the Institutional Review Board did not approve of this study.

⁴ A second order variable was dropped from the study.

(Walker, 1997) and the atypical exemplar was a character named Olive. Participants were told to focus their attention on this character. The content of the film provided the following information (adapted from the methods of Bless et al. (2001)): first, the exemplar was presented in a favorable light; second, the exemplar's actions demonstrated that she was well integrated into the culture of her group, the elderly; third, the film suggested that the individual was somewhat atypical and exceptional for the group.

Following the film presentation, participants were provided with different questionnaires, in which the category manipulation was embedded. First, all participants were asked to report, on a scale from one to nine, how absorbed they were into the film. They were then asked to briefly describe what was taking place in the video. This question was included for two reasons. First, it served to make the video more salient in the participants' minds when completing the rest of the questionnaire. Second, it allowed the experimenters to know how well each participant understood the film.

In the first condition, designed to elicit inclusion of the exemplar into the group category, participants were asked how well integrated Olive was into the elderly population. The choices were 1) very well integrated, 2) well integrated, 3) poorly integrated, and 4) not at all integrated. Given the contextual information of the film clips, participants were expected to judge the exemplar as "very well integrated" or "well integrated." In the second condition, designed to elicit exclusion of the exemplar from the group category, participants were asked to characterize the exemplar as one of four response alternatives: 1) gambler, 2) elderly, but an exception, 3) homeless, or 4) invalid. Given the contextual information of the film, participants were expected to indicate that Olive is a group member, but an exception. Participants in the third group, the control,

responded to a question that was irrelevant to inclusion and exclusion (“Which of the following card games did the characters play in the movie? (Circle the one): Go Fish, Poker, Bridge, Rummy”). The purpose of these questions was thus to induce the participants to carry out a targeted search, by way of similarity or dissimilarity hypothesis testing, which should result in either the inclusion of the exemplar in the same category as the contextual information, or the exclusion of the exemplar from this category.

Participants in all three conditions then judged, on a scale from one to nine, the exemplar (Olive) and the group (the elderly) on four stereotype-relevant and six stereotype-irrelevant traits. The stereotype relevant traits were “cautious”, “dependent”, “forgetful”, and “traditional”. The stereotype-irrelevant traits were articulate, arrogant, natural, secretive⁵, musical, and jealous. The selection of relevant traits was determined through pre-testing and by examining elderly traits (or synonyms/antonyms of these traits) used in a previous study by Bargh, Chen, and Burrows (1996). The participants next responded to an open-ended question asking what they thought the study was about. This question was included so the experimenters could analyze the results in light of the participants’ degree of insight into the purpose of the study. Finally, the participants were asked to circle their gender, college, year of graduation, and race.

The dependent variable was participants’ ratings of the stereotype-relevant traits, both for the elderly population and for Olive.

⁵ “Secretive” was dropped from the analysis because this trait mistakenly did not appear on all of the questionnaires.

Results

Twenty-one questionnaires were excluded from the analysis because the manipulation question was not effective for these participants (i.e., they did not choose “very well integrated” or “well integrated” if they were in the inclusion condition, and they did not choose “elderly, but an exception” if they were in the exclusion condition). The results presented below are thus based on the responses of 124 participants (62 males, 62 females). Additionally, in four instances, the experimenters filled in numbers when the participants did not rate either the group or Olive on one of the nine traits. In place of the missing data, the experimenters substituted the average score for the remainder of the participants for that trait in that condition. Finally, as demonstrated by the responses to the first open-ended question, it should be noted that all participants sufficiently understood the film.

Participants in the inclusion condition should evidence an assimilation effect, in that they should judge the exemplar more stereotypically, and the group less stereotypically, than participants in the control condition. We expect to find an opposite pattern for participants’ ratings of the group; we expect the group to be rated more stereotypically, and Olive to be rated less stereotypically, again relative to the control group.

Results by Condition using Composite Measure

Our first step was to combine all of the ratings for the four stereotype-relevant traits into two composite measures, one for the ratings of Olive and the other for the ratings of the group. To calculate the composites, the average ratings for Olive on each

of the four stereotype-relevant traits were calculated, and these four numbers were averaged together to form a single composite. The same process was carried out to form a composite for the group.

Using this composite measure, we first ran a 3 (condition: inclusion, exclusion, and control) x 2 (target: ratings of the group vs. ratings of Olive) x 2 (order: ratings of Olive followed by ratings of the group, or vice versa) x 2 (gender) x 4 (experimenter) mixed ANOVA. Because there was no statistically significant effect of gender or experimenter, we reran the ANOVA, omitting these variables. The ANOVA thus became a 3 (condition) x 2 (target) x 2 (order) mixed design. This ANOVA evidenced a significant main effect of target, meaning that participants responded differently depending on whether they were asked about the group or the exemplar: $F(1,118) = 279.661, p < .000$ ($M_{\text{exemplar}} = 3.067; M_{\text{group}} = 6.054$). This shows us that our exemplar, Olive, was indeed atypical of her group (the elderly). There was also a trend towards an interaction between target and condition: $F(2,118) = 2.883, p < .060$. This means that participants in different conditions (inclusion, exclusion, and control) rated the exemplar differently than they rated the group for the stereotype-relevant traits. The means for the target by condition are presented in Table 1.

Table 1
Mean Composite Scores by Condition & Target

Condition	Exemplar	Group
Inclusion	3.255	6.432
Exclusion	2.772	6.170
Control	3.129	5.513

n for inclusion = 44; exclusion = 41; control = 39

Reliability of Composite

We next ran a reliability test to determine whether or not the four stereotype-relevant traits, “dependent”, “cautious”, “forgetful” and “traditional”, were all tapping into a common descriptive measure; that is, we wanted to find out whether these four traits were all relevant to the stereotype of the elderly. We calculated the reliability of these traits for participants’ responses to the questions about the group and for the questions about the atypical exemplar, Olive. The reliability coefficient for the exemplar was $\alpha = .527$, and the reliability for the group was $\alpha = .767$.

Results of Condition for Individual Traits

Because the reliability coefficient for the individual traits turned out to be relatively low, we analyzed our results for each trait separately instead of relying solely on the composite measure. We ran four separate ANOVAs, all with a 3 (condition) x 2 (target) x 2 (order) x 2 (gender) x 4 (experimenter) mixed design. Again, there was no significant effect of gender or experimenter, and so we reran the ANOVAs without these variables. The data reported below are thus the result of four separate 3 (condition: inclusion, exclusion, and control) x 2 (target: ratings of Olive vs. ratings of the group) x 2 (order: ratings of Olive followed by ratings of the group, or vice versa) mixed ANOVAs.

There was a significant main effect of target: “traditional”: $F(1,118) = 252.721$, $p < .000$; “forgetful”: $F(1,118) = 190.430$, $p < .000$; “cautious”: $F(1,118) = 115.735$, $p < .000$; “dependent”: $F(1,118) = 85.518$, $p < .000$. This again shows us that participants responded differently depending on whether they were asked to judge the exemplar or whether they were asked to judge the group. These means are presented in Table 2.

Table 2
Mean Ratings of Target by Trait (N= 124)

Trait	Exemplar	Group
Traditional	2.936	6.508
Forgetful	2.411	5.653
Cautious	3.613	6.226
Dependent	3.307	5.831

We next calculated the means and significance levels for each of the four stereotype-relevant traits by condition (inclusion, exclusion, and control). There was no significant interaction between condition and target for “traditional”: $F(2,118) = .650$, $p < .524$, meaning that the average rating for the exemplar and for the group were not statistically different from each other across the three conditions. Comparing the differences between the means in each condition shows us that not only was there no significant interaction between condition and target, but participants’ judgments of the group and of the individual were not moving in the direction predicted in our hypothesis. In the inclusion condition, we hypothesized that the judgments of the exemplar and the judgments of the group would be assimilated towards each other. Alternatively, we expected that, in the exclusion condition, the judgments of the exemplar and the judgments of the group would be contrasted away from each other. If this had been the case, the difference between the average ratings in the inclusion condition would have been smaller than the difference between the average ratings in the exclusion condition, and the differences between the ratings in the control condition should have fallen somewhere in the middle. As can be seen in Table 3, this was not the result.

Table 3
Mean Ratings of Traditional by Condition & Target

Condition	Exemplar	Group	Difference between Means
Inclusion	3.029	6.854	3.825
Exclusion	2.896	6.567	3.671
Control	2.818	6.036	3.218

n for inclusion = 44; exclusion = 41; control = 39

There was a significant interaction between condition and target for “forgetful”: $F(2,118) = 4.593, p < .012$. Additionally, as expected, the difference between the means in the inclusion condition was smaller than the difference between the means in the exclusion condition. However, the difference between the means in the control condition did not fall in between the difference scores of the inclusion condition and the exclusion condition. These means are reported in Table 4.

Table 4
Mean Ratings of Forgetful by Condition & Target

Condition	Exemplar	Group	Difference between Means
Inclusion	2.488	6.138	3.650
Exclusion	2.139	5.942	3.803
Control	2.587	4.796	2.209

n for inclusion = 44; exclusion = 41; control = 39

The means for “cautious” did not show a significant interaction with target: $F(2,118) = 1.492, p < .229$. As well, comparing the difference scores shows us that participants’ judgments were not moving in the direction predicted in the hypothesis. That is, we expected to find a greater difference between ratings of the exemplar versus the group in the exclusion condition than in the inclusion condition, but the opposite results were found. These means are reported in Table 5.

Table 5
Mean Ratings of Cautious by Condition & Target

Condition	Exemplar	Group	Difference between Means
Inclusion	3.646	6.600	2.954
Exclusion	3.455	6.304	2.849
Control	3.721	5.730	2.009

n for inclusion = 44; exclusion = 41; control = 39

Again, there was no significant interaction between condition and target for the trait “dependent”: $F(2,118) = 1.789, p < .172$. The means were moving in the predicted direction, however, because the difference between means was smaller in the inclusion condition than in the exclusion condition. But again, the prediction that the control would fall in the middle was not evidenced. These means are reported in Table 6.

Table 6
Mean Ratings of Dependent by Condition & Target

Condition	Exemplar	Group	Difference between Means
Inclusion	3.858	6.137	2.279
Exclusion	2.599	5.868	3.269
Control	3.391	5.488	2.097

n for inclusion = 44; exclusion = 41; control = 39

Post Hoc for Forgetful x Condition

Having a difference score allowed us to perform a post hoc analysis for the forgetful x condition interaction reported above⁶. The difference score was calculated by finding the average score for the ratings of the exemplar on forgetfulness and subtracting this from the average score of the group rating. As expected from the previous ANOVA

⁶ SPSS does not perform post hoc tests on mixed designs.

for “forgetful”, a one-way ANOVA revealed a main effect of condition: $F(2,121) = 4.152, p < .018$. The means were: inclusion ($n = 44$) = 3.636; exclusion ($n = 41$) = 3.781; control ($n = 39$) = 2.231.

The results of a Bonferroni post hoc revealed that there was a significant difference between the control and the exclusion condition ($p < .031$) on ratings of forgetfulness and a significant trend between the difference scores in the control and inclusion conditions ($p < .053$). This tells us that the significant interaction between condition and “forgetful” was not due to differences in responses by participants in the inclusion condition versus the exclusion condition, but rather the significance was in comparison to the control.

Effect of Insight

To gain a better understanding of why we did not find statistically significant results by condition, we analyzed participants’ responses to the open-ended question about what they thought to be the purpose of the study. Our thinking was that the participants who had a better idea of what the experiment was about might have responded differently than participants that did not have this insight. We first separated the participants into three groups. Those who had no idea of the purpose of the study were assigned to group “one”. Examples of responses from these participants as to the purpose of the study include, “I have no clue” and “to find out if the characters in the film portray old people as we see them in society.” Those who had some idea about the purpose of the study were assigned to group “two”. Examples of responses from participants in this group include, “Perhaps something about people’s perception of the

elderly. Olive may be a good contrast to what we believe elderly people are like” and “To gauge participants’ reactions to a set of scenes that portray elderly people in a role that is in some ways very un-stereotypical.” Those assigned to the third group had a good understanding of what the study was about. Examples of responses from these participants include, “to see how viewing or concentrating on Olive affects our perceptions of the other characters portrayed within the film” and “to evaluate the reaction people have of Olive- a fairly non-traditional elderly woman- to the stereotypical elderly person.”

The open-ended questions were rated by two of the experimenters who were blind to the condition in which the participant was tested. When the experimenters did not agree as to the insight score, the two scores were averaged. There was 83% inter-rater reliability. We then collapsed these three groupings into two groupings. Everyone with a score of “one” was put in one group, and the remaining participants, who had some idea of the purpose of the study, were put into group “two”. In this way, we could compare the questionnaires of people who had no idea of the purpose of the study to everyone else, and we would thus be able to see whether participants’ level of insight into the purpose of the experiment affected their responses. All together, 83 participants fell into the first category, and 41 participants fell into the second category. A 3 (condition: inclusion, exclusion, and control) x 2 (insight: no insight vs. some insight) x 2 (target: ratings for the individual vs. ratings for the group) x 2 (order: ratings of Olive followed by ratings of the group, or vice versa) mixed ANOVA revealed that there was no significant interaction between insight and condition: $F(2,112) = 1.194, p < .307$.

Effect of Order on Individual Trait Responses

Using the same four ANOVAs from before [3 (condition: inclusion, exclusion, and control) x 2 (target: ratings of Olive vs. ratings of the group) x 2 (order: ratings of Olive followed by ratings of the group, or vice versa)] ,we next examined how the order of the questions (questions about the exemplar first followed by questions about the group, or vice versa) affected the means and statistical significance of each trait. All four traits (“traditional”: $F(1,118) = 3.941, p < .049$; “forgetful”: $F(1,118) = 7.275, p < .008$), “cautious”: $F(1,118) = 5.402, p < .022$) and “dependent”: $F(1,118) = 14.128, p < .000$) were significantly affected by the order in which the target questions were presented. These results thus show that the participants who first answered questions about Olive and then answered questions about the group consistently rated the targets differently than the participants who answered the questions in the reverse order. Specifically, for each of the traits, ratings of the exemplar were always lower (less stereotypical) when questions about the exemplar were presented before questions about the group. Further, ratings of the group were constantly higher (more stereotypical) when the questions about the exemplar were presented before the questions about the group. These means are reported in Table 7, Table 8, Table 9, and Table 10.

Table 7
Mean Ratings of Traditional by Order & Target

Order	Exemplar	Group
Exemplar first	2.717	6.733
Group first	3.113	6.238

n for exemplar first = 60; group first = 64

Table 8
Mean Ratings of Forgetful by Order & Target

Order	Exemplar	Group
Exemplar first	2.300	6.150
Group first	2.509	5.100

n for exemplar first = 60; group first = 64

Table 9
Mean Ratings of Cautious by Order & Target

Order	Exemplar	Group
Exemplar first	3.400	6.567
Group first	3.814	5.856

n for exemplar first = 60; group first = 64

Table 10
Mean Ratings of Dependent by Order & Target

Order	Exemplar	Group
Exemplar first	2.950	6.517
Group first	3.615	5.146

n for exemplar first = 60; group first = 64

Discussion

As predicted, there was a statistically significant difference between participants' judgments of the group and their judgments of Olive on the four stereotype-relevant traits. This indicates that Olive was indeed an atypical group member. We next found that there was a trend for the interaction we were most interested in- between condition and target. Both the main effect of target and this interaction, however, were detected using a composite score to represent the trait variable, and so before any conclusions could be drawn from these results we needed to make sure that the composite was a reliable measure. It turned out that for ratings of the group, the composite was a reliable measure of the four stereotype-relevant traits, but it was not a reliable measure for ratings

of the individual. That is, the results of the reliability test showed that when participants rated the group on the four stereotype-relevant traits, each trait was measuring something similar. The fact that the composite score for the individual traits was not reliable shows us that when participants rated the exemplar on the four stereotype-relevant traits, the traits were not measuring the same thing; namely, they were not measuring the stereotypicality of Olive.

Effect of Condition on Target Ratings

Because the composite was not a reliable measure for the exemplar ratings, we proceeded to analyze the results separately for each trait. A statistically significant interaction was found between the target and each of the four stereotype-relevant traits. This confirms that Olive was not seen as a typical group member, because participants rated her differently than they rated the group on the four relevant traits.

The results of the ANOVA comparing target and condition for the individual traits were largely unresponsive of our hypothesis that participants in the inclusion condition would evidence an assimilation effect and participants in the exclusion condition would evidence a contrast effect, relative to the control group. The only trait for which there was a significant interaction between target and condition was “forgetful.” Upon further examination, however, these results as well were not in support of our hypothesis. The Bonferroni post hoc, calculated using the difference score (average group ratings minus average exemplar ratings) for “forgetful”, revealed that the significant interaction was not due to differences in participants’ responses across the experimental conditions. Rather, the significant interaction was between the inclusion

condition and the control and the exclusion condition and the control (not between the inclusion and the exclusion conditions). While this shows us that our control was effective in that participants in the control group responded differently than participants in the experimental groups, such a significant interaction does not lend support to our hypothesis.

In an effort to gain a fuller understanding of why we did not find a significant interaction between the experimental conditions and the target, we analyzed participants' responses to the open-ended question concerning what they thought was the purpose of the study. Our post hoc hypothesis was that participants who thought they knew what the study was about would have responded differently than participants who were not aware of the purpose of the study. However, there was not significant interaction between level of insight and condition.

There are many possibilities as to why there was not significant interaction between target and condition. It is possible that the contextual information was too distinct. Stapel and Koomen (1998) found that, the more distinct the contextual stimulus, the more likely it is that contrast will result when the context is compared to a new target. In the present study, the contextual information was the video, and it is possible that the video presented Olive as such an atypical character that she became highly distinctive in the participants' minds. Therefore, when participants rated Olive and the group on the stereotype-relevant traits, the distinctiveness of Olive could have overshadowed the effect of condition. That is, even participants in the inclusion condition could have engaged in comparison contrast when judging elderly people in general. However, the likelihood that this occurred diminishes when one considers the effect of order. That is, if Olive was

distinctive enough to negate the effect of condition, it would be unlikely that, in the cases where participants responded to questions about the group before they responded to questions about Olive, the ratings of Olive would be assimilated to judgments of the group. In other words, it is unlikely that Olive was too distinctive to allow for a significant interaction between target and condition, while at the same time not being so distinctive so as to interfere with the interaction between target and order.

It is also possible that we did not see the expected results of condition because the contextual stimuli did not contain enough features that were representative of elderly people in general. According to Schwarz and Bless (1992b), representativeness is influenced by category width, in that the wider a category, the more likely it is that the category will contain features that are representative of the target. Wider categories thus tend to result in assimilation between the standard and the target, while narrower categories lead to contrast. In the present study, it is possible that the contextual information that we presented to the participants did not include enough cues to make the participants think that the people in the video were representative of the target when the target was elderly people in general. Therefore, when the participants in the inclusion condition judged the group, contrast still resulted. In the exclusion condition, participants were expected to contrast the group with the contextual information presented by the video, so it is harder to determine whether the contrast effects that were produced here were a result of the manipulation question or of unrepresentativeness of the context with respect to the group.

Another explanation for the lack of a significant interaction between condition and target could be that the manipulation question, which was meant to induce some

participants to include Olive within the group while inducing other participants to exclude Olive from the group, was not effective. The means for target x condition indicate that, although statistical significance was reached only for “forgetful”, participants in the control group judged the targets to be less stereotypical than did participants in the experimental conditions for all four stereotype-relevant traits. This difference was especially true for ratings of the group. This suggests that both manipulation questions made the participants more ready to see both Olive, and especially the group, as being stereotypical. This most likely occurred because, in the experimental conditions, the elderly population, and Olive’s relationship to this group, were made salient, whereas the corresponding question in the control condition did not make reference to this relationship. Participants in the experimental conditions were then more ready to see Olive and the group as being stereotypical than were participants in the control condition.

Another explanation could be that the manipulation question in the inclusion condition did not cause the participants to engage in similarity hypothesis testing. If similarity hypothesis testing had taken place, participants would have searched for information in the contextual stimuli that was similar to the target information (and vice versa), leading to assimilation. The fact that the difference scores between ratings for the group and ratings of Olive in the inclusion condition were not smaller than the difference score in the control condition suggests that similarity hypothesis testing, and thus assimilation, did not take place. The failure of the manipulation question in the inclusion condition to encourage similarity hypothesis testing can be explained by some of the factors already mentioned; namely, the lack of representativeness between the contextual

information and the group could have prevented these participants from searching for similarities between the standard and the target group.

It is also possible that there was no statistically significant interaction between condition and target because the four stereotype-relevant traits were in actuality not very relevant to the elderly stereotype. If this were the case, then even if the participants did perceive the targets to vary in stereotypicality in the ways that the experimenters predicted, this would not have been reflected in the target ratings. It is also possible that the inclusion/exclusion model of assimilation and contrast, as explained in the Bless et al. (2001) study on which the current experiment is based, does not apply to contextual information of the level of complexity present in this study. The contextual information in the Bless et al. (2001) was an audio-recorded description of the stereotyped group and its atypical exemplar. This information was made available to participants in the present study via video clips, which may have been too rich of a stimulus representation to be explainable by the previous theories. Since the information about the exemplar and the group in the present study is, arguably, more real-to-life than these representations have been in past studies, it would be judicious to develop a theory that encompasses more naturalistic situations.

Effect of Order on Target Ratings

There was a highly significant, although unexpected, interaction between the target ratings and the order variable. Specifically, for each of the four stereotype-relevant traits, Olive received higher scores when participants responded to questions about her after they responded to questions about the group, compared to participants who first

responded to questions about her. Alternatively, the participants who answered questions about Olive before they answered questions about the group always rated the group more stereotypically than did participants who answered the questions about the group first.

Although this was not where we expected to find a contrast and assimilation effect, the results do conform with the contrast and assimilation theories previously discussed. According to the interpretation/comparison model, assimilation will result when the contextual information is judged to be interpretively relevant to the target (Stapel & Koomen, 1998). The chances of having interpretive relevance are increased when the target is ambiguous and when the contextual information is applicable to the target. In relation to the effect of order found in the present study, it is conceivable that, when participants who rated Olive first answered questions about the group, the category “elderly people” was made salient in their minds. When they then proceeded to answer questions about Olive, they were more ready to see her as being a member of the elderly group, and thus their beliefs about the group were interpretively relevant to their judgments of Olive. As a result, participants’ judgments of Olive were assimilated towards their judgments of the group, and Olive was thus seen as more stereotypical by these participants than by the participants who first answered questions about Olive.

A similar explanation can account for why participants rated the group more stereotypically when they answered the questions about Olive before they answered the questions about the group. It is possible that the participants who rated Olive first did not see Olive as being interpretively relevant to the group, but rather saw her as being comparatively relevant to the group. Comparison relevance arises when the contextual information is sufficiently distinct to serve as a standard of comparison and when the

contextual information and the target are seen to be members of the same category (Stapel & Koomen, 1998). In this case, the contextual information (Olive) was indeed distinct, and Olive and the target group were seen to be members of the same broad category (people). Olive thus served both as the contextual information and a standard of comparison when participants then rated the group. This means that the participants likely engaged in comparison contrast when they evaluated the group after being exposed to Olive. Such a comparison can only result in contrast, and the group was thus seen as being more stereotypical in comparison to the largely a-stereotypical exemplar.

It is also possible that when the participants rated Olive before the group, neither contrast nor assimilation occurred. This would have been the case if the participants did not see the group as being interpretively or comparatively relevant to the target, Olive. Since the experimenters intentionally tried to present Olive as an atypical group member, it is possible that the participants did not see her as being applicable to (and therefore not interpretively relevant to), nor as being a member of the same category as (and therefore not comparatively relevant to), the group. If this was the case, the significant effect of order could have been a result of differences between the two sets of scores for Olive- 1) the score that resulted from the assimilation effect when the group was rated first and 2) the score that resulted when Olive was rated first and no assimilation or contrast effects occurred.

The interpretation/comparison model as an explanation for the order effects is not as strong as it seems at first, however. This is because, to explain the assimilation effects that resulted when the group was rated before Olive, Olive needed to be seen as ambiguous, but the comparative relevance explanation for the contrast that resulted when

Olive was rated before the group relies upon Olive being seen as distinct. It is possible, however, that the order itself affected the distinctiveness of Olive. That is, participants who rated Olive before they rated the group could have perceived Olive to be more distinctive than the participants who answered the questions in the opposite order. On the other hand, it is possible that the participants who rated the group before they rated Olive perceived Olive as being less distinctive, and therefore more ambiguous, than did participants who rated Olive first. This may have occurred because answering questions about the group brought the concept “age” to mind, which thus made Olive seem less distinct because she was seen as a member of the elderly category.

The Evaluative Meaning of Participants’ Responses

According to Brown (1986), every trait term has both an evaluative meaning and a descriptive meaning. For instance, the descriptive meaning of the words “thrifty” and “stingy” are the same, but describing someone as stingy implies a more negative character trait than does describing someone as thrifty. Considering the double meaning attached to trait words can be helpful in understanding the results of the present study. Specifically, while the composite score for the judgments of the exemplar along the four stereotype-relevant traits ($\alpha = .527$) was not high enough to allow for the assumption that each of the traits was measuring the stereotypicality of Olive, it is possible that the composite score does tell us something about how the participants were *evaluating* the exemplar. The fact that there was a relatively high composite score for the judgments of the group ($\alpha = .766$) also suggests that the participants were engaging in common evaluative judgments of the targets. And since, for all of the stereotype-relevant traits, a

higher rating corresponds to a more negative evaluation (i.e. being overly traditional, forgetful, cautious and dependent are usually not thought of as being positive characteristics), it makes sense that there was a statistically significant effect of target. That is, the participants rated the group as being higher on these four traits than they did Olive. This is not surprising since people are more apt to negatively evaluate a group (the elderly) than they are a distinct individual (Olive).

The evaluative component of judgments can also offer an explanation for the nearly significant interaction between the composite target and condition ($F(2, 118) = 2.883, p < .060$). Even though the composite score is not a reliable measure of stereotypically, this trend suggests that the condition that the participants were in affected how they evaluated the group and Olive. Specifically, participants in the inclusion and exclusion conditions rated the group more stereotypically than did participants in the control condition. A possible explanation for this difference is that, after being asked a manipulation question that included a reference to the elderly population, participants in the experimental conditions were more ready to rate the group negatively when filling out the subsequent questionnaire. That is, making explicit reference to the group could have indicated to the participants that the questionnaire was interested in stereotypes, and thus these participants could have felt more comfortable responding honestly when evaluating the group. On the other hand, the corresponding question in the control condition did not make reference to the elderly population, and participants in this condition may thus have been more hesitant in negatively evaluating the group.

Suggestions for Future Research

In the present research, the order of target presentation likely interfered with the interaction between target and condition. In future studies, efforts should be taken to avoid effects of order. Instead of explicitly asking participants to rate the exemplar and then rate the group, or vice versa, the experimenters could retrieve this information in a subtler manner to prevent the participants from knowing exactly which target they are being asked about. For instance, after being exposed to the condition manipulation, participants could respond to an open-ended question asking them to describe both the exemplar and the group, and the answers could then be rated to see if the targets were described differently depending on condition.

Once a design such as the one suggested above has been formulated that prevents order influences, it should be tested first with contextual stimuli and targets that are of a similar complexity to those used in the Bless et al. (2001) study. If the predicted results are indeed found, the experiment should then be conducted again using more complex contextual information, such as video clips. If the results of the second study do not support the hypothesis, then it would be fair to say that the inclusion/exclusion model of assimilation and contrast does not extend to situations where the contextual stimuli is more complex.

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Appendix A : Sample Questionnaire

Experimenter's Name: _____ Date: _____

Participant #: _____ Participant Gender: _____

Please answer the following questions:

1. Please indicate on the following scale, the degree to which you were in absorbed in the film.

1	2	3	4	5	6	7	8	9
not at all								highly
absorbed								absorbed

2. Briefly describe what was going on in these scenes:

(ASKED IN INCLUSION CONDITION)

3. How well integrated into the elderly population is the main character, Olive?

(Circle the best choice):

-Very well integrated

-Well integrated

-Poorly integrated

-Not at all integrated

OR (ASKED IN EXCLUSION CONDITION)

Which of the following *best* describes the main character, Olive? (Circle the best choice):

-Gambler

-Elderly, but an exception

-Homeless

-Invalid

OR (ASKED IN CONTROL CONIDITION)

Which of the following card games did the characters play in the movie?

(Circle the one):

- Go Fish

- Poker

- Bridge

- Rummy

4. Please evaluate the degree to which the following traits characterize Olive:
(QUESTION 4 AND QUESTION 5 WERE REVERSED IN HALF OF THE SURVEYS)

Articulate:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Arrogant:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Natural:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Traditional:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Secretive:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Forgetful:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree

Jealous:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Cautious:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Musical:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Dependent:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree

5. Please evaluate the degree to which the following traits characterize the elderly:

Jealous:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Musical:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Articulate:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Dependent:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Natural:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree
Secretive:	1	2	3	4	5	6	7	8	9
	strongly								strongly
	disagree								agree

Traditional:	1	2	3	4	5	6	7	8	9
	strongly disagree								strongly agree
Cautious:	1	2	3	4	5	6	7	8	9
	strongly disagree								strongly agree
Arrogant:	1	2	3	4	5	6	7	8	9
	strongly disagree								strongly agree
Forgetful:	1	2	3	4	5	6	7	8	9
	strongly disagree								strongly agree

- Prior to this study, had you seen the film from which these clips were taken?

Yes No

- Briefly describe what you believe to be the purpose of this study:

Please provide the following personal information:

Age: _____ **Gender:** M F **School:** HC BMC **Class:** 04 05 06 07

Race:

- Caucasian
- Asian
- African American
- Native American
- Hispanic
- Other

Please return this questionnaire to the experimenter once it is completed.

Thank you for your participation!

Appendix B: Description of Video

The clips came from the film “Never Too Late” (Walker, 1997). The selected scenes showed Olive, the main character, both interacting with her friends (one woman and two men) and engaging in atypical behavior. The scenes that portrayed Olive as being well integrated into her group of friends showed the group playing bridge and chatting in one of the men’s homes. The clips that portrayed atypical behaviors showed Olive instant-messaging a friend, “Little Suzy”, and hacking into computers.

Appendix C: What we told the Participants

- You will be entered into a lottery for one of three \$50 prizes
- In this experiment, we're studying how people interpret video clips that resemble real life situations.
- Please get comfortable and try to enjoy this movie (about 15 minutes long) as you would any other, but do not talk while the film is running.
- When it is done, I will come back and give you a short questionnaire about the film.
- Your responses on this questionnaire will remain anonymous.
- If you do not feel comfortable answering a question, you may leave it blank.
- Participants will be watching video excerpts under difference conditions. In this condition, we ask that you focus your attention on the main character, Olive, the elderly woman washing her face during the opening scenes of the video.

Appendix D: Consent Form

Participant #: (LEFT BLANK)

Experimenter: _____

Consent Form

Thank you for participating in our study.

This study investigates how viewers interpret films that are meant to represent realistic people and scenarios. In this experiment, you will watch a series of film clips and then complete a questionnaire regarding the footage. The film is approximately twelve minutes long and the questionnaire should take 10-15 minutes to complete.

Before you begin, we ask that you read the following statement carefully and sign below if you agree to the terms of the study:

“I understand that my responses will remain anonymous, and that I can withdraw from the experiment at any point. I also understand that my name will be entered into a lottery for one of three fifty-dollar prizes and that at the end of the semester, I will receive an email explaining the purpose of this study and its findings. Finally, I agree that I will not discuss any part of the study with anyone until I receive the email in May.”

Name: _____

Date: _____

Thank you,

Cham, Jane, Julia & Prachi

