Tel Aviv University
Gershon Gordon Faculty of Social Sciences
The School of Psychological Sciences

When Can Every Group Member be Above the Group's Average?

The Weighted LOGE Theory of Social Comparison Biases

Shir Etgar

Submitted to the Senate of Tel-Aviv University in Partial Fulfillment of
the Requirements for the Degree of Philosophy

March, 2015

This work was carried out under the supervision of
Prof. Yechiel Klar

*Dedicated to my beloved grandmother,
Rivka Partashnikov,
who taught me that*

***"Education is the most valuable property
a person can possess"***

I wish you could be with me in this special moment...

Contents

List of Tables	ii
List of Figures	iii
Abstract	iv
Chapter 1: Introduction	1
1.1 Different theoretical accounts of NSSB.....	3
1.2 From LOGE to W-LOGE	10
1.3 The Structure of the Current Work: Contrasting the W-LOGE Hypotheses with Unique Attribute and Focalism Hypotheses	15
1.4 The General Method	17
Chapter 2: W-LOGE vs. Unique Attribute Theory	18
2.1 Study 1: Is There a Correlation Between Perceived Within Group Similarities and Bias Size?	18
2.2 Study 2: Homogeneity vs. Heterogeneity Manipulations	22
2.3 Study 3: Manipulating Similarities and Dissimilarities Within the Same Group	26
2.4 Discussion: the Influence of Within Group Similarities on Bias Size	29
Chapter 3: W-LOGE vs. Focalism.....	32
3.1 Study 4: Reviewing All Group Members in a Group of Four Books.....	34
3.2 Study 5: All Group Members were Reviewed Twice.....	37
3.3 Study 6: Reviewing All Group Members in Two Different Groups	40
3.4 Can Bias Size Increase as a Function of Order, Under the Influence of Greater Within Group Similarity?	44
3.5 Study 7: Influence of Within-Group Similarities/Dissimilarities on the Order Effect in Negative Groups	46
3.6 Study 8: Influence of Within-Group Similarities/Dissimilarities on the Order Effect in Positive Groups	49
3.7 Study 9: Increased Order Effect in Positive Groups Using Homogeneity/ Heterogeneity Manipulations.....	52
3.8 Discussion: Sequential NSSB Effects.....	54
Chapter 4: General Discussion	57
4.1 What About Additional Alternative Internal Explanations.....	58
4.2 Limitations and Further research.....	62
4.3 Conclusion.....	63
References.....	65
Hebrew Abstract	8

List of Tables

Table 1. Means, standard deviations, and one-sample t-tests for each Characteristic in Study 1	21
Table 2. Means, standard deviations, and one-sample t-testS for each Characteristic in Study 2	25
Table 3. Means, standard deviations and one-sample t-testS by Characteristic and Manipulation in Study 3	29
Table 4. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 4.....	36
Table 5. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 5.....	39
Table 6. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 6.....	43
Table 7. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 7.....	48
Table 8. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 8.....	51
Table 9. Means, standard deviations and one-sample t-test for each target (by order of judgment) in Study 9.....	53

List of Figures

Figure 1. Bias size by order and similarity manipulation in study 7.....	49
Figure 2. Bias size by order and similarity manipulation in study 8.....	52
Figure 3. Bias size by order and similarity manipulation in study 9.....	54

Abstract

The Non Selective Superiority bias (NSSB) is defined as the tendency to judge each randomly chosen group member from a positive group as better than the other group members from the same group. This is a reliable and robust bias, but its origins are still debated.

Internal explanations of the bias posit that NSSB is caused by some disturbance or distortion in the internal comparisons between the focal group member and the other members of the same group. According to unique attribute theory (Chambers, 2010), NSSB occurs because each individual group member of a positive group is judged according to the dimension that positively distinguishes this individual member from the other members of the same positive group. According to focalism theories (e.g., Chambers & Windschitl, 2004; Klar & Giladi 1997; 1999; Moore & Kim, 2003; Posavac, Sanbonmatsu, Kardes, & Fitzsimons, 2004; Windschitl, Kruger & Simms, 2003), judges focus excessively on the standing of the focal member on the judged quality rather than the corresponding status of the others in the group on the same quality.

Giladi and Klar (2002) proposed an external explanation for the bias which they termed LOGE (Local comparisons- General Standards). They suggested that in addition to the internal comparison between the judged group member and the others in the local group (i.e., $DIFF_L$), a second, simultaneous comparison also takes place. This is a comparison between the judged group member (alongside the others in the group) and the general (ordinary, neutral) standard (i.e., $DIFF_G$), which represents the judge's knowledge and experience about the range of qualities within the larger category that pertains to the judged local group. This external standard is logically

irrelevant to the comparison process; however, cognitively, it cannot be avoided. Thus, according to LOGE, NSSB is due to the intrusive effect of DIFF_G , the external comparison with the general stand pertaining to the judged quality.

The original LOGE theory paid no special attention to the relative judgmental weights of the two components (i.e., internal and external; DIFF_L and DIFF_G) in the resulting comparative judgment. The current work attempts to rectify this issue. In this work a better specified version of LOGE which is termed Weighted-LOGE, (W-LOGE) is proposed. In this model, the relative weights of DIFF_L and DIFF_G can vary. This enables the test of the prediction that the greater the judgmental focus which is ascribed to DIFF_G (rather than to DIFF_L), the greater the comparative bias should be. It is further proposed that when the focus is on the internal commonalities (rather than differences) within the local group, or when the local group is homogenous (rather than heterogeneous) in its qualities, judges are likely to be less preoccupied with within-group comparisons (i.e., DIFF_L) and consequently will be engaged to a greater extent in the external comparison (DIFF_G). This is expected to lead to a greater NSSB, given that the origin of the NSSB (according to LOGE and W-LOGE) lies mainly in this external comparison.

In the first empirical section, unique attribute theory is contrasted with W-LOGE in terms of within-group similarities versus within-group differences. According to unique attribute theory, greater NSSB is expected when the group is heterogeneous or when the focus is on what positively distinguishes each group member from the others in the local group. In support of W-LOGE and in contrast to the unique attribute approach, Study 1 found a positive correlation between the extent of within-group similarities and NSSB magnitude. Study 2 used an experimental design to demonstrate that homogenous rather than heterogeneous local groups

created greater NSSB, and Study 3, in a within-participants design, in which participants judged the same group following a similarities or dissimilarities focus, found that NSSB was greater under a within-group similarities rather than dissimilarities focus.

The next empirical section employed a sequential comparative judgment method, in which each and every individual group member was judged in turn against the others in the group. If, as argued by the focalism approaches, the origin of NSSB is the neglect of the non-focal group members during the comparative judgment, when the focal member role alternates in each comparative judgment from one group member to another, this assumed "wall of neglect" should gradually be eroded and NSSB should progressively diminish or even totally disappear. Study 4 showed that no such mitigation occurred during sequential judgments. Study 5 showed that no improvement was observed following one round of comparative judgments, when all the local group members were reviewed one after the other, and they were provided with the opportunity to conduct a second set of comparative judgments regarding the same group. In Study 6, following a full round of comparative judgments of within-group comparisons in one group, participants were given the opportunity to conduct a similar set of comparisons in another group. NSSB judgments were as potent in the same series as in the first one. Studies 7-9 employed the sequential method to directly contrast W-LOGE with focalism and unique attribute approaches. If NSSB is caused by $DIFF_G$ rather than $DIFF_L$ and if judges repeatedly consider how superior the local group members are to the general standard, the sequential comparisons need not to diminish the bias. Furthermore when the focus is on within-group similarities (rather than differences) the pluses of each of the local group members vis-à-vis the general standards might even bolster the judgment of the subsequent group members

(who are perceived as similar) and thus NSSB could even gradually *increase* with successive judgments. Increased non-selective biases with sequential comparative judgments is not only opposed to the focalism approaches, which predict a decrease or even complete disappearance of bias with sequential comparisons, but it is also in contrast to unique attribute hypothesis which predicts greater (and perhaps continued) bias under within-group differences rather than a similarities focus. Study 7 tested the non-selective *inferiority* bias (NSIB), which is the corresponding NSSB negative bias, in which almost every group member is judged as *worse* than the others in the same negative group. NSIB remained intact in the differences focus and increased in the similarities focus. In Studies 8 and 9, similar results were obtained regarding NSSB; that is, intact sequential biases in the differences focus (Study 8) and heterogeneous groups (Study 9) and increased sequential bias in the corresponding similarities focus and homogenous groups.

Thus, the nine studies reported in this work, which utilized the W-LOGE model, support the "external" LOGE explanation over the "internal" unique attribute and focalism explanations of NSSB (and in one study also NSIB). More generally, they corroborate the claim that the logically irrelevant comparison of the judged group members (alongside the others in the group) with the general standard, is the main cause of NSSB, and that the relative judgmental weight assigned to this external standard regulates the size of the bias.

Chapter 1: Introduction

Anna is asked to write down the names of four musical pieces she likes a great deal. Then, she is asked to judge them one after the other vis à vis the others in the group of four highly liked musical pieces: Is “Beautiful Day” better or worse than the three other songs in this group of four highly liked musical pieces? Yes, of course it is better. “Kathy’s Song”? One of the best musical pieces, so of course it is better than the others in the group of four highly liked musical pieces. “Guardian?” Better. “Bohemian Rhapsody?” a masterpiece, obviously it is better than the rest in this select group. Ridiculous as it may sound, Anna judges all four of these highly liked musical pieces as better than the others in this group of four highly liked song she has just created.

Anna might sound crazy, but she is not crazier than any of us. It is currently well-documented that within-group comparisons; i.e., comparing one group member to the other group members, or to the group average, are susceptible to systematic biases. Specifically, as shown originally by Klar and his colleagues (Giladi & Klar, 2002; Klar, 2002; Klar & Giladi, 1997, 1999; Klar Medding & Sarel, 1996) and replicated by others (see: Bruchmann et al., 2013; Chambers, 2010; Kruger, Windschitl, Burrus, Fessel & Chambers, 2008; Posavac, Kardes, Sanbonmatsu, & Fitzsimons, 2005; Suls et al., 2010), each randomly chosen group member from a positive group is generally judged as better than all the other group members from the same positive group. Logically of course, in every group there should be some group members which are better, worse or as good as the other group members, and it would be illogical to judge every group member as better than the other group members; however, the robustness of this member-to-group comparative bias strongly suggest

that this is not the case in real-world comparative judgments, even among highly educated and statistically trained university student populations (e.g., Klar, 2002).

Amazingly, even an anonymous group member can be judged as better than the average group member in a positive group. For example, Klar and Giladi (1997, study 3) provided participants with only the ID number of the comparison target, defined as a Tel Aviv University (TAU) student. This non-diagnostic detail enabled the participants (TAU students themselves) to judge the person as better than the average student at TAU. In another set of studies, Klar (2002) asked participants to judge all the group members of a positive group one by one, and showed that—similar to Anna—each group member was judged as better than the other members of the same positive group. The within-group comparative bias just discussed was termed the “non-selective superiority bias” (NSSB)¹ (Giladi & Klar, 2002).

The major goal of this dissertation is to present a better specified version of LOGE theory (Giladi & Klar, 2002) for the NSSB/NSIB judgmental phenomena. This better specified (termed here W-LOGE) will be contrasted and tested against two other leading accounts of NSSB, the unique attribute theory and focalism approaches.

¹ It should be noted that unlike Suls et al. (2010), who used the term “BTA”, this dissertation uses the more general term “NSSB”, which is not limited to comparisons against an average, and whose meaning is more representative of the non-selective nature of the bias.

1.1 Different Theoretical Accounts of NSSB

The three main theories that attempt to explain NSSB are the unique attribute theory, focalism, and LOGE. This section outlines how each of these theories attempts to explain the NSSB.

1.1.1 Unique Attribute Theory

Unique attribute theory (Chambers, 2010) proposes that NSSB occurs because each individual group member of a positive group is judged according to the dimension that positively distinguishes this individual member from the other members of the same positive group. Thus, each group member can be perceived as better than the group average or the others in the group. Returning to Anna: “Guardian” can be judged as better than the average song in the group of four musical pieces due to its great lyrics; “Bohemian Rhapsody” is better because of its superior rhythmic and harmonic changes, and so on. Each song can be better than the group average based on its uniquely positive dimension.

In support of this reasoning, Chambers (2010; Study 1) asked participants to compare Las Vegas or Honolulu to other attractive vacation destinations. Participants rated both destinations as better than the other attractive destinations in the attractive group. Chambers showed that participants who were asked to compare Las Vegas to the other destinations considered Vegas' entertainment potential, whereas participants who were asked to compare Honolulu to the same group of attractive destinations reflected more on Honolulu's great climate. That is, according to this account, each vacation destination was compared mainly in terms of its unique positive attribute and this unique attribute made it a better vacation location than the other destinations.

In another study, Chambers (2010; Study 4) examined whether the bias decreased when participants were manipulated to focus on the non-unique attribute of

the attractive destination. Before comparing Honolulu to the group of other attractive destinations, participants were asked to focus on Honolulu compared to the other destinations in terms of entertainment (a non-unique attribute) or climate (the unique attribute). The bias was indeed lower under a non-unique attribute focus.

In other words, according to unique attribute theory, greater comparative biases emerge when the local group members (i.e., all the pieces within the group of four highly liked musical pieces) are different from each other in what make them great and the group is thus heterogeneous. By contrast, when the group is homogeneous and all group members are similar to each other in what make them great, unique attribute theory predicts smaller biases, or even no biases at all.

1.1.2 Focalism

Focalism accounts argue that during the comparison process between two entities (e.g., a group member vs. group average), one entity may receive greater judgmental attention than the other (see Chambers, Windschitl & Suls, 2003; Klar & Giladi, 1997; Klar, Medding & Sarel, 1996; Kruger & Burrus, 2004; Moore & Kim, 2003; Moore & Small, 2007; Windschitl, Kruger & Simms, 2003). For example, when Anna is comparing “Beautiful Day” to the average in the group of four liked musical pieces, she would focus more on her liking of this specific song, rather than on her liking of the other three musical pieces in the group of four liked musical pieces.

Why? Different focalism accounts give varying reasons for this presumed judgmental tendency. One major explanation (e.g., Chambers & Windschitl, 2004; Epely & Dunning, 2000; Klar, Medding, & Sarel, 1996; Posavac, Kardes, Sanbonmatsu, & Fitzsimons, 2005; Price, 2001; Sears, 1983) suggests that singular entities receive greater judgmental weight during the comparison process than plural

entities (e.g., the group, the average group member, a base rate). Another explanation is that differences in knowledge about the compared entities are responsible for the uneven judgmental weights, so that more focus is given to the better known entity (Kruger et al., 2008; Windschitl, Rose, Stalkfleet, & Smith, 2008).

Still another explanation (e.g., Chambers & Windschitl, 2004; Klar & Giladi 1997; 1999; Moore & Kim, 2003; Windschitl, Kruger & Simms, 2003) is that the focal target (i.e., the item being compared to the others) receives greater judgmental weight than its referents (i.e., the non-focal entities). According to this explanation, the within-group comparative judgment process is quite similar to an absolute judgment. That is, asking “Is ‘Beautiful Day’ better or worse relative to the other musical pieces in the group of four liked musical pieces?” is similar to asking “Is “Beautiful Day” a good or a bad song?” (see Klar & Giladi, 1999). In other words, the comparative judgment strongly relies on the judgment of the focal target rather than that of the referents.

A possible demonstration of this mechanism was reported in a study by Moore and Kim (2003), in which participants were asked to bet who would win a trivia quiz: the focal target or its competitors. The trivia questions were either easy or difficult and there were either one or five additional competitors. Participants placed higher bets on the focal competitor in the easy than the difficult condition and the number of the other competitors had no effect on their bets. The authors concluded that participants focused more on the focal target than on the competitors. It is as though they ignored the fact that easy questions would be easier for the non-focal competitors as well and the difficult questions would also be difficult for the competitors as well.

The focalism accounts enable a way to reduce or even eliminate NSSB. Assuming that the bias occurs due to the assignment of lesser judgmental weight to

the non-focal (or plural) entities, allotting more attention to these entities should decrease the bias or remove it altogether. One way to achieve this goal would be to ask the participants to compare each member in the local group one-by-one to the others in the group. In so doing, the role of the focal target would alternate between the group members, and the judges would gradually fill in the attention void and become more attentive and informed about everyone in the judged group. The comparative bias should thus gradually decline or disappear altogether. In other words, if the bias is caused by a greater focus on the focal target rather than on the other members of the group, *defocusing* manipulations should decrease the bias or even completely eliminate it. Returning to Anna's example, when Anna compares "Beautiful Day" to the group's average, according to the focalizing approach, she mainly focuses on this specific musical piece, while the three other musical pieces which also comprise the "group average" and which, normatively, serve as the comparison, receive lesser attention. Thus, requiring Anna to compare each and every musical piece in the group should provide her with the opportunity to focus in turn on all the group members and this should gradually diminish and eliminate the comparative bias.

1.1.3 From Internal Approaches to External Approach

The unique attribute and focalism accounts can be regarded as "internal" (or local) explanations of the bias. They imply that NSSB is caused by some disturbance or distortion in the internal comparisons between the focal group member (i.e., "Bohemian Rhapsody") and the other members of the same local group (e.g., the group of four liked musical pieces). According to these explanations, the judges either focus too much on the uniquely positive qualities of the currently judged group member or they focus excessively on the standing of this member rather than the

others in the group on the judged quality. The comparative process, according to these approaches, takes place solely in the internal space of the local group; that is, between the judged group member and the other members of the local group.

Another possibility, however, is that in addition to these internal comparisons, other comparisons, external to the local group, also take place. This is, in fact, the essence of LOGE theory described below.

1.1.4 LOGE Theory

LOGE (LOcal comparisons GEneral standard) theory (Giladi & Klar, 2002), posits that in addition to the internal comparison between the group member and the others in the local group (e.g., how does “Bohemian Rhapsody” compare to the other three pieces in the group of four liked musical pieces) a second, simultaneous comparison also takes place. This is a comparison between the judged group member and a general (ordinary, neutral) standard, which represents the judge's knowledge and experience about the range of qualities within the larger category which pertains to the judged local group.

For example, when the local group is "highly liked musical pieces," the relevant larger category is "musical pieces" which are retained in Anna's active repertoire of musical pieces. Naturally, some of these pieces are highly liked, some are quite liked, others are "not especially liked nor especially disliked" and others are quite disliked or even highly disliked. In relation to this large category of musical pieces represented in Anna's memory, "Bohemian Rhapsody," as well as "Beautiful Day", "Kathy's Song" and "Guardian" are at the high end of this range and they all are much better than the pieces which are regarded as "ordinary" or "neutral." Thus, Bohemian Rhapsody and the three other highly liked pieces are above the general standard. According to LOGE theory, when comparing the judged highly liked piece

to the others in the local group of highly liked musical pieces, the judges (inappropriately but cognitively inescapably) also conduct a supplementary comparison in which they compare the targeted piece (and possibly the others in the local group) to the general standard. The outcome of this comparative judgment is in fact the product of the two comparisons: the "local" and the "general."

Following Giladi and Klar (2002) this can be expressed by the following formula:

$$\text{COMPmember- local group} = (\text{DIFF}_L + \text{DIFF}_G)/2 = ((\text{group member- Local group}) + (\text{group member- General Standard}))/2 \quad (1)$$

DIFF_L stands for the differences between the judged member and the others in the judged local group, and DIFF_G stands for the difference between the group member and the general standard. The mean of these two differences is the outcome of the presumed within-group comparative judgment.

The outcome of DIFF_L , the local difference can of course be positive, zero or negative in value, as logic and commonsense require (after all, in any group some group members are above, some are at group average and some are below it). However, when the entire local group (e.g., the group of four highly liked musical pieces) is a positively judged group, it is above the general standard, and DIFF_G will inevitably be a positive value for all group members. Thus, for positive local groups, the combined value of the within- group comparative judgment is almost always a positive value. According to LOGE, this is the source of the NSSB effect. It is an external rather than internal source because it does not depend on any systematic distortion in the local comparison (i.e. in DIFF_L) but rather is based on a systematic bias due to the addition of the logically irrelevant, external comparison of the judged local group with the general standard (i.e., DIFF_G).

But why, in the first place, would judges be involved the apparently excessive and logically irrelevant DIFF_G comparison? According to LOGE, this extra comparison is psychologically unavoidable because the very essence of a positive entity (e.g., a positive musical piece) is that its positivity is defined against the backdrop of other musical pieces which are not as positive as the focal entity and the accompanying members of its positive local group. For example, "Bohemian Rhapsody" is considered to be a "great musical piece" not so much because it is better than other equally great pieces (such as "Beautiful Day", "Kathy's Song" and "Guardian") but mainly because it is perceived as better than most other musical pieces that the judges remember. This large repertoire of musical pieces gives rise to the general standard, the ordinary and mundane level of quality. Consequently, the general (or ordinary) standard is a spontaneous standard against which Bohemian Rhapsody is defined as a "great musical piece" and it is almost impossible to sidestep this standard when the question turns out to be "is Bohemian Rhapsody greater or less great than the other great pieces in the local group?" The general standard impacts this comparison because it is the contrast that makes "Bohemian Rhapsody" and the other pieces in the select local group "great".

The external nature of the NSSB effect can best be exemplified in the aforementioned Klar & Giladi work (1997, study 3) in which TAU participants were provided with only the ID number of an anonymous person, defined as a TAU student and they judged this unindividuated student as more intelligent than the other students in TAU. It is noteworthy that nothing in the information provided (i.e. "X is a TAU student") could imply that this anonymous student was more or less intelligent than other TAU students. Yet, This non- informative detail enabled the participants to judge the anonymous student to be more intelligent than the average student at TAU.

What accounts for this? Tel Aviv University students are assumed to be highly intelligent compared to adult general intelligence levels. This information is presumed to be irrelevant during a comparison of an anonymous TAU student and an average TAU student, but apparently, as LOGE suggests, it cannot be avoided. Therefore, an anonymous TAU student can be more intelligent than his or her group average, since during the comparison process s/he is also being compared to the general value of intelligence in the general population.

1.2 From LOGE to W-LOGE

As just discussed, the major tenet of LOGE theory as presented by Giladi and Klar (2002) is that the member to group comparative judgment is a product of two separate comparative judgments: the difference between the judged group member and the others in the local group (i.e., $DIFF_L$) and the difference between the judged group members and the general standard (i.e., $DIFF_G$). The original LOGE concept paid no special attention to the relative judgmental weights of the two components (internal and external) in the resulting comparative judgment. These weights may be conveniently considered (as expressed in Formula 1) to be equal. However, despite the simplicity and elegance of this formula there is no reason to assume that in reality all judges in all judgmental situations always assign equal weight to $DIFF_L$ and $DIFF_G$. Thus, a more flexible version of LOGE which can be termed the Weighted-LOGE (W-LOGE) is proposed here. This model, in which the relative weights of $DIFF_L$ and $DIFF_G$ may vary, might provide a better and possibly more realistic account of the member to group comparison process²

² Windschitl, Rose, Stalkfleet and Smith (2008) proposed a similar weighting idea which they presented as a joint development of LOGE and the probability judgment conception "extended support theory" (Idson, Krantz, Osherson & Bonini, 2001). However, the main

Thus, the following weighted-LOGE (W-LOGE) model is proposed by Formula #2:

$$\text{COMPmember-local group} = ((W)\text{DIFF}_L) + ((1-W)\text{DIFF}_G) = ((W)(\text{Individual-Local group})) + ((1-W)\text{Individual-General Standard}) \quad (2)$$

(When $1 > W > 0$)

Besides its greater potential ecological validity, the utility of determining the judgmental weights of DIFF_L and DIFF_G is further underscored by the fact that according to LOGE the main source of NSSB lies in DIFF_G , the external comparison, rather than in DIFF_L , the internal comparison. A direct implication of the W-LOGE equation is that the greater the judgmental weight of DIFF_L (and thus the lesser is the weight of DIFF_G), the less pronounced NSSB should be.

Therefore, one major benefit of the proposed W-LOGE concept is its potential contribution in testing LOGE's main assumption that NSSB is mainly a product of the external (DIFF_G) rather than the internal (DIFF_L) comparison. Adding the weights parameters to the basic LOGE concept may pave the way for the creation of discrete manipulations that vary the relative weights of DIFF_G , and DIFF_L and observe the effects of these variations on the bias magnitude.

One potential way to affect the weight of DIFF_G is to increase or decrease the distance of the entire positive local group from the general standard. The lesser this distance, the less captivating the DIFF_G should be. Indeed, such a distance manipulation was successfully attempted by Giladi and Klar (2002; Study 4) who

difference between the current conception and Windschitl et al.'s proposal is that their formula refers to the probability assigned to a specific hypothesis vis-à-vis a competing hypothesis against the backdrop of a default value of probability (e.g., .5), while DIFF_G in the current formula represents the perceived distance from the ordinary level of quality (or general standard) in the larger category from which the local group was taken.

found greater NSSB effects as a function of the greater positivity of the entire local group (i.e., its positive distance from the general standard). However, this manipulation has several drawbacks: First due to the distance / judgmental weight confound, it is impossible to determine whether the greater comparative bias is due to the greater distance from the general standard (as in LOGE), the greater judgmental weight (as in W-LOGE) or both. Second, it is also impossible to fully differentiate the LOGE (or W-LOGE) account from the unique attribute explanation (e.g., the greater the local group's positivity, the greater the potential for each member's unique positivity) or from the focalism explanation (e.g., the greater the local group's positivity, the greater the potential for the focal target's absolute positivity). Thus, an increase in the $DIFF_G$ judgmental weight via greater distance from the general standard cannot provide unequivocal evidence for the W-LOGE account.

There is, however another possible way to change the balance between $DIFF_L$ and $DIFF_G$. This is by increasing the relative weight of $DIFF_L$ (and thus decreasing the relative weight of $DIFF_G$) without changing the distance of the entire local group and its individual vis-à-vis the general standard. According to W-LOGE, the greater the $DIFF_L$ relative weight is, the lesser is the NSSB.

1.2.1 How Can the Relative Weights of $DIFF_L$ and $DIFF_G$ be Experimentally Manipulated?

As just proposed, testing the effect of the relative weights of $DIFF_L$ and $DIFF_G$ on the magnitude of NSSB would require modifying these weights. One way of doing so is by changing the relative salience of the two comparisons. The influence of salience on judgments is well documented. For instance, in the visual attention field, it is known that attention is captured by the most salient visual event (for a review see Yantis, 1996). The focus of attention effects cannot be volitionally avoided, even

when it is irrelevant to the judges' goals. In one experimental demonstration (Theeuwes, 1992), participants were asked to indicate whether bars inside a green circle were horizontal or vertical. When one of the circles was distinctly colored (i.e., in red) response time was slowed, although color was not relevant to the judgmental task. Similar effects were found in social judgments. For instance, having a "solo" status- such as being the only woman in a group of men- attracts considerable attention and influences the judgment of the "solo" group member, and the judgments of the group as a whole (Crocker & McGraw, 1984). Behaving differently from one's group members or the social category also draws attention to the "solo" group member and affects the judgment (Fiske & Taylor, 1991). In practical terms even being the only one wearing a patterned striped shirt in the room will make you more salient compared to others (McArthur & Ginsberg, 1981).

As can be alluded, contrasts are the essence of comparisons, social and non-social alike. When asked to compare a particular group member to the others in the local group, judges are in fact required to look for contrasts between them. However, as proposed by LOGE (and W-LOGE), an external contrast which is foreign to the logically relevant, internal contrast may intrude into the comparative process, and compete for judgmental weight. But what determines the relative weight of the internal and the external comparisons? The concrete examples just cited may provide an important clue. They might suggest that the more salient a specific contrast is, the more attention this contrast would attract, and the larger its judgmental weight would be. How can the salience of the different contrasts be modified? Apparently, this can be done by manipulating the overall homogeneity-heterogeneity of the local group without changing the positivity of its individual members or that of the local group as a whole.

1.2.2 Changing the Homogeneity / Heterogeneity Level of the Local Group.

Anna and her selection of four highly liked musical pieces can serve again as an illustration. When asked to list four musical pieces that she highly likes, Anna can provide a highly liked group of musical pieces which are also heterogenic and diverse in terms of their styles, genres and tastes. For example, the first piece could be an especially rhythmic and temperamental instrumental piece, the second, a tremendously melodic and quiet vocal piece, the third, a very rugged and stormy electronic piece, the fourth, an "old fashioned" orchestral classical piece. Similarly, Anna might provide a highly liked group of musical pieces which are also highly homogenous in terms of style, genre and taste. While both local groups and their individual members might be equal in terms of how much Anna likes them, they are very different in the amount of within-group contrasts they allow. The first (i.e., heterogeneous) group is much richer in such internal contrasts whereas the second (homogenous) group is much less so. Thus, a contrast-seeking judge may find many more opportunities for within-group comparisons in the first case and many fewer in the second case. Given that contrasts are the basis of any comparative process, in the homogenous local group, the contrast-seeking judge would easily be swayed to contrast the judged group member (and possibly also the others in the homogenous group) to the general standard. Thus, in the heterogeneous group judges would be more preoccupied with within-group comparisons whereas in the homogenous groups they would be engaged to a greater extent in external comparisons. Given that according to LOGE (and W-LOGE) the origin of the NSSB comparative biases lies mainly in the external comparisons, in the latter cases NSSB should be greater.

1.2.3 The Ironic Effects of Sequential Within-Group Comparisons

Sequential comparisons, in which each group member is compared one-by-one to the others in the group, present another setting for studying the "internal" (i.e., $DIFF_L$) vs. the "external" (i.e., $DIFF_G$) effects. As already mentioned, according to LOGE (and W-LOGE) the comparative bias does not originate in inappropriate comparisons of the judged group members to the others in the local group (e.g., the neglect of the standing on the judged trait of the others in the group) and therefore NSSB should be resistant to sequential comparative judgments (see Klar, 2002). W-LOGE takes this prediction a step further. When each successive comparative judgment provides an opportunity to contrast the currently judged group member with the general standard (i.e., under the homogeneity condition) evidence for the superiority of the local group vis à vis the general standard might accumulate and gradually elevate the status of the judged group members against the general standard. This might result in a gradual intensification of the NSSB with successive comparisons.

1.3 The Structure of the Current Work: Contrasting W-LOGE with Unique Attribute and Focalism.

The major goal of this work is to test the key LOGE hypothesis regarding the "external" (i.e., flow from $DIFF_G$) origin of NSSB against the "internal" (i.e., flow from $DIFF_L$) explanations, represented by unique attribute and focalism theories. As just suggested, manipulations that vary the relative weights of $DIFF_L$ and $DIFF_G$ as predicted by W-LOGE can be used to test this claim.

In Chapter 2, unique attribute theory is contrasted with W-LOGE in terms of within-group similarities versus within-group differences. As described previously,

unique attribute theory proposes greater NSSB when the group is heterogeneous and diverse, and thus unique superiority can be claimed for each individual group member, on different grounds. W-LOGE, on the other hand makes the opposite argument. According to this approach greater similarity within the local group produces little internal contrasts and it draws the judges' attention to a more salient, external, contrast with the general standard. When the differences with the general standard are marked, this should result in greater NSSB.

Chapter 3 contrasts W-LOGE with focalism. According to focalism accounts, successive comparisons turn each individual group member one after the other into the focal member's role, and thus they should gradually erode the "wall of neglect" toward the other group members and NSSB should thus diminish or even altogether disappear. Thus, according to the focalism logic (and according to commonsense) successive comparative judgments should lessen or completely eliminate the bias. LOGE (and W-LOGE) do not share this prediction. According to this approach, NSSB is caused by the "external" contrast between the judged group member (and possibly, the others in the local group) and the general standard, and not by neglect of the corresponding status of the others in the local group. Thus, NSSB should not necessarily decline with successive comparisons. Moreover, according to this reasoning, NSSB can even gradually increase when the internal contrasts are small (i.e., when the local group is internally similar) and different from the general standard.

1.4 The General Method

All the experiments presented in the following chapters share a similar method, designed on the basis of similar experiments conducted in the domain of NSSB (e.g., Giladi & Klar, 2002; Klar, 2002). Participants were asked to construct a group of several liked or positively evaluated group members, then write the group members' names on small slips of paper and put them into a cup. Then, they were asked to draw one slip of paper from the cup at random, and compare the group member that its name written on the slip to the group average, using one positive characteristic. For instance: "To what extent is this movie more or less **excellent** than the average movie in the group of four movies you have just created?" The Likert scale ranged from -4 (much less than the average member of this group), through to 0 (equal to the average member of this group), to +4 (much more than the average member of this group). Henceforth, this dissertation will refer to these questions as "*comparative questions*". Then, participants repeated this procedure until they finished evaluating all the group members of their group. NSSB is calculated as the average of their answers to the *comparative questions*. Rationally, the sum of deviations from the average is always zero. Therefore, any significant positive deviation from zero demonstrates the presence of NSSB.

By putting all the slips of paper into the cup, mixing them up, and choosing one at a time, the procedure allows participants to be aware of the random nature of this choice and the comparison process.

Chapter 2: W-LOGE vs. Unique Attribute Theory

The goal of this chapter is to contrast W-LOGE and unique attribute predictions. As mentioned, according to unique attribute theory, greater dissimilarities between the different members of the local group will cause greater NSSB. In contrast, W-LOGE assumes that greater internal similarities between the different members of the local group will cause greater NSSB. The studies in this chapter were conducted to examine these opposing hypotheses. Study 1 examined whether there is any correlation between perceived within-group similarities or dissimilarities and bias size. Study 2 manipulated the homogeneity/heterogeneity levels of the local group by asking participants to compile a group of musical pieces and movies from either the same or different genres. Study 3 employed a within-subjects method and asked participants to focus on group similarities and group dissimilarities.

2.1 Study 1: Is There a Correlation Between Perceived Within Group Similarities and Bias Size?

This study was conducted to examine whether there was any relationship between perceived within-group similarities and bias size, and the nature of this relationship. As mentioned, W-LOGE predicts that greater within-group similarities will be related to greater bias size, whereas unique attribute theory predicts that greater within- group similarities will be related to smaller bias size.

2.1.1 Method.

2.1.1.1 Participants.

Eighty-nine TAU students (51 women, $M_{\text{age}} = 25.06$, $SD = 4.14$) were asked to participate in a short decision making study while they were studying in the library or

at cafeterias on the TAU campus, in exchange for entry into a raffle with four prizes of 50 NIS (~\$12) each.

2.1.1.2 Measures and procedure.

To ensure that participants would compile a group that they really liked, participants were asked to select either to participate in a task about music or a task about movies, based on their areas of interests. Then, they were given a questionnaire about their chosen topic and a small plastic cup with four slips of paper in it. Participants were instructed to list a group of four movies or four songs that they greatly like and then to write these names on the slips, fold the slips of paper twice, put them in the cup, and scramble them.

Next, as described in section 1.4, participants were asked to choose one random slip of paper at a time, and answer a *comparative question*. Each comparative question required the participants to judge the randomly selected group member vis-à-vis to the other members in the highly liked group they had just created. Each comparative question asked about a different positive characteristic: excellence, favorite, liking or successfulness. These characteristics were selected due to their generality and ability to suit questions about both movies and musical pieces, and because they had a similar meaning. The four comparative questions appeared in random order.

2.1.1.2.1 Perceived within- group similarity question.

Participants were also asked “To what extent are all group members perceived as similar or different from each other?” using a 5-point Likert scale, ranging from 1 (“the four group members are very different from each other”) to 5 (“the four group members are very similar to each other”).

2.1.1.2.2 Perceived group liking and perceived group valence (Control measures).

Then, participants were asked to judge to what extent they liked or disliked the group they created, and to what extent they estimated the group valence as a positive or negative group. Both questions were rated using a 5-point Likert scale. Perceived group liking scale was ranging from “like it very much” to “dislike it very much”, and perceived group valence was ranging from “highly appraised as a good group” to “highly appraised as a bad group”.

Upon completion of the experimental tasks, participants were thanked and asked to write their names on a different piece of paper to take part in the raffle.

2.1.2 Results and discussion.

2.1.2.1 Sample differences.

Both the music ($N= 45$) and movies sample ($N= 44$) were similar on all measures: bias size, perceived group similarity and group liking (all F 's < 1) and group positivity ($F(1,87)= 2.83, p= .10$). Therefore, the samples were combined.

2.1.2.2 Bias magnitude.

Table 1 presents the means, standard deviations and one-sample t values for each individual characteristic. Logically, if each characteristic is randomly assigned to one movie or musical piece, the mean of each characteristic across participants should equal zero. Thus, any significant deviation from zero will demonstrate a NSSB. Table 1 indicates that a significant NSSB was found for all four different characteristics (all p 's < .001). A repeated measures analysis of variance (ANOVA) found no differences in the bias size between the different traits ($F < 1$). Therefore, a general bias variable was formed, calculated as the average of the four answers.

Table 1. *Means, Standard Deviations, and one-sample t-tests for each characteristic in Study 1*

Characteristic	Bias magnitude		
	<i>M</i>	<i>SD</i>	<i>t</i>
Excellence	1.04	1.59	6.21**
Favorite	1.07	1.79	5.61**
Successfulness	1.19	1.54	7.31**
Liking	1.15	1.53	7.08**
Average	1.11	.813	12.91**

Note. ** $p < .001$, one-sample t test against H_0 : bias size = .00.

A significant positive correlation was found between perceived group similarity and the bias magnitude ($r = .230, p < 0.05$) suggesting that, greater perceived group similarity increases NSSB as posited by W-LOGE.

No correlation was found between perceived group similarity and the control measures: Either between perceived group liking and perceived group similarity ($r = 0.04, p = .73$) or between perceived group valence and perceived group similarity ($r = 0.04, p = .71$). Thus, it may be concluded that perceived group similarity, and not any other possible confound such as group valence or group liking, was the factor that correlated with bias size.

Thus, the positive correlation between the perceived within-group similarity and NSSB size was demonstrated, showing that, as posited by W-LOGE, the greater the perceived within-group similarity, the greater the bias. However, the correlational nature of this study did not allow any causal interpretation of these relations. In Studies 2 and 3, perceived within-group similarity was manipulated rather than just measured, to better test the contrasting W-LOGE and unique attribute hypotheses.

2.2 Study 2: Homogeneity vs. Heterogeneity Manipulations

This study manipulated within-group similarities/dissimilarities by asking participants to create a homogeneous (i.e., high within-group similarities) or heterogeneous (i.e., low within-group similarities) group of liked musical pieces or movies. W-LOGE predicts that under a homogeneous condition, the bias will be greater, compared to under a heterogeneous condition. Unique attribute theory makes the opposite prediction.

2.2.1 Method.

2.2.1.1 Participants.

A total of 248 participants (130 women, $M_{\text{age}} = 24.71$, $SD = 3.84$) were asked to participate in this study. Participants who had been studying in the library when asked to take part were offered an exchange for entry into a raffle with four prizes of 50 NIS (~\$12) each ($N = 160$, 75 women, $M_{\text{age}} = 25.19$, $SD = 4.12$). The remaining participants, who were recruited during TAU Students' Day in 2012, received 10 NIS (~\$2.5) for participation ($N = 88$, 55 women, $M_{\text{age}} = 23.83$, $SD = 3.10$).

2.2.2 Measures and procedure.

Similar to Study 1, participants were asked to choose their topic of interest (i.e., either movies or music). Then, they were given a questionnaire about their chosen topic and a small plastic cup with four slips of paper in it. In addition, they were given a list of movies or musical pieces arranged by genres. This list was used to help them recall liked movies or musical pieces from the same or from different genres, corresponding to the condition to which they were assigned.

2.2.2.1 Homogeneity/heterogeneity manipulation.

Participants were asked to compile a group of four movies or musical pieces they highly liked. The instructions were: "You will now be asked to select four

movies/musical pieces that you are familiar with and you truly like. Please write down four movies/musical pieces from the same genre [from different genres]. Please make sure that all four movies/musical pieces are from the same genre [that every movie/song is from a different genre]. You may use the attached movies/musical pieces list arranged by genres, or select movies/musical pieces from memory. Please select movies/musical pieces that you really like, and from the same genre [from different genres]”. Next, participants were asked to write these names on the slips of paper, put them in the cup and scramble them. They were then asked to choose one random slip at a time, and to answer one *comparative question* about the movie/song written on the slip. Characteristics were identical to those used in Study 1, and appeared in random order.

2.2.2.2 Perceived group liking (Control measures).

As in Study 1, participants were asked to judge to what extent they liked or disliked the group they created, and to what extent they estimated the group valence as a positive or negative group. Both questions were rated using a 5-point Likert scale. Perceived group liking scale was ranging from “like it very much” to “dislike it very much”, and perceived group valence was ranging from “highly appraised as a good group” to “highly appraised as a bad group”.

2.2.2.3 Manipulation check.

Participants were also asked to judge To what extent are all group members perceived as similar or different from each other, on a 5-point scale ranging from 1 (“the four group members are very similar to each other”) to 5 (“the four group members are very different from each other”).

Upon completion of the experimental tasks, participants were thanked and asked to write their names on a different piece of paper to take part in the raffle (in the library sample), or were thanked and received 10 NIS (in the Students' Day sample).

2.2.3 Results and discussion.

2.2.3.1 Sample differences.

Both the music ($N=116$) and movies sample ($N=131$) were similar in terms of most measures: bias size ($F < 1$), group liking ($F(1,246)=1.96, p=0.16$) and group valence ($\chi^2(1)=.97, p=0.37$). The only difference between the samples was that the perceived within-group similarity was higher in the movies group ($M_{\text{movies}}=3.21$, $M_{\text{music}}=2.92$, $F(1, 245)=4.98, p < 0.05$). Therefore, it was treated differently in the analyses including this variable.

2.2.3.2 Manipulation check.

To ensure that participants in the homogenous condition found the group members they compiled more similar to each other than participants in the heterogeneous condition, three different one-way ANOVAs were conducted. First, due to the fact that the two topic groups were somewhat different in their within-group similarity judgments, two different ANOVAs were conducted, one for each topic group. In both samples, the similarities / differences manipulation was successful. As intended, under the homogenous condition the four group members were perceived to be more similar to each other than under the heterogeneous condition. The results for the movies condition were: $M_{\text{homogenous}}=2.80$, $M_{\text{heterogeneous}}=3.60$, $F(1,129)=24.04, p < 0.001$, and for the music condition they were: $M_{\text{homogenous}}=2.52$, $M_{\text{heterogeneous}}=3.33$, $F(1,114)=24.32, p < 0.001$.

A third one-way ANOVA, including the entire sample, was then conducted: Here too, under the homogenous condition ($M=2.67$, $SD=.92$) the four group

members were perceived to be more similar to each other than under the heterogeneous condition ($M= 3.48$, $SD= .92$), $F(1,245)= 47.56$, $p< 0.001$.

2.2.3.3 Bias magnitude.

Table 2 presents the means, standard deviations and one-sample t values for each individual characteristic. A significant NSSB was found in all four different characteristics. A repeated measures ANOVA found no differences in bias size among all four characteristics ($F< 1$). Therefore, a general NSSB variable was formed, calculated as the average of the four comparative judgments.

Table 2. Means, Standard Deviations, and one-sample t -tests for each characteristic in Study 2

Characteristic	Bias magnitude		
	M	SD	t
Excellence	1.07	1.70	9.86**
Favorite	.91	1.78	8.01**
Successfulness	1.15	1.78	10.21**
Liking	1.05	1.81	9.12**
Average	1.05	.88	18.70**

Note. ** $p < .001$, one-sample t test against H_0 : bias size = .00.

Consistent with the W-LOGE prediction, the one-way ANOVA showed that NSSB was higher in the homogenous group ($M= 1.16$, $SD= .89$) than in the heterogeneous group ($M= .93$, $SD= .93$), $F(1,246)= 4.33$, $p< 0.05$.

Several possible confounding variables needed, however, to be tested. First, homogenous groups might be liked more than heterogenous groups. However, a one-way ANOVA with the condition as the independent variable and perceived group liking as the DV showed that this was not the case: the homogenous and heterogeneous conditions did not differ in their levels of perceived group liking

($M_{\text{homogeneity}} = 1.44$, $M_{\text{heterogeneity}} = 1.47$, $F < 1$). Similarly, a chi square test also showed that group valence did not differ significantly as a function of within-group homogeneity, $\chi^2(1) = 1.97$, $p = .202$.

These results suggest that the level of within-group similarities and not other confounds accounted for NSSB size under the homogeneity / heterogeneity conditions.

2.3 Study 3: Manipulating Similarities and Dissimilarities Within the Same Group

Study 1 provided initial correlational evidence that greater perceived within-group similarities are related to greater NSSB size and Study 2 strengthened this conclusion, by providing experimental evidence that perceived group similarities influence NSSB size. However, in this between-subject study, participants created different groups of musical pieces or movies that indeed did not differ in their perceived positivity or liking, but could differ in other ways that were unaccounted for. Hence a stronger case might be obtained if the very same group were judged (in a within-participants design) under a similarities or differences focus. This was done in Study 3.

Beyond this specific methodological advantage, within- subject studies have several statistical advantages, due to their ability to remove the subject variance from the total error variance (Greenwald, 1976). Interpersonal differences have been found to have great influence on many biases (see McElroey & Dowd, 2007), and therefore testing NSSB in a within-subject design may reflect more accurate effects.

Here as well, unique attribute theory predicts that the dissimilarities condition will create greater NSSB, whereas W-LOGE predicts greater biases under the similarities condition.

2.3.1 Method.

2.3.1.1 Participants.

A total of 83 participants (50 women, $M_{age} = 26.57$, $SD = 7.88$) were asked to participate in the study. Participants were recruited during a class break at the Humanities Department cafeteria, in exchange for entry into a raffle with four prizes of 50 NIS (~\$12) each ($N = 32$, 19 women, $M_{age} = 25.06$, $SD = 2.45$). Other participants, who were recruited during a class break in a literature lecture, received a snack as compensation for participating ($N = 51$, 31 women, $M_{age} = 27.50$, $SD = 9.77$).

2.3.1.2 Measures and procedure.

Similar to previous studies, participants were given a questionnaire, a small plastic cup and four slips of paper. On the first page of the questionnaire, participants were asked to list four books they had read and highly liked, and then to write these names on the slips of paper, put them in the cup and scramble them, as described in section 1.4. It should be noted that the process of creating the group and putting the slips of paper inside the cup occurred before participants were exposed to the manipulations.

2.3.1.3 Similarities/dissimilarities manipulation.

After composing the group, participants were asked in a counter-balanced order to write down the positive qualities and characteristics that were common to all four books [unique to each of the books] that made them favor these books (this manipulation was adapted from Mussweiler, 2003). The instructions were: “Now, imagine that you need to present these books to someone who does not know them.

Write a description that will present the four books to this person. Try to focus on the common [unique] qualities and characteristics of these four books. In other words, describe in which ways the four books that you chose are similar to [different from] each other, based on the qualities that made you like them". Participants were encouraged to be as detailed and specific as possible.

Each manipulation was followed by the same four *comparative questions*. The judged characteristics were identical to those used in Studies 1 and 2, and presented in random order. Participants were thanked and were given a snack (in the literature class sample), or asked to write their names on a different slip of paper to take part in the raffle (in the cafeteria sample).

2.3.2 Results and discussion.

2.3.2.1 Bias magnitude.

Table 3 presents the means, standard deviations and one-sample t values for all four individual characteristics under the manipulation conditions. NSSB was found for all four different characteristics, in both manipulations. One-way repeated measures ANOVAs found no differences in bias size within the different characteristics for both the similarities and dissimilarities manipulations (both F 's < 1). Therefore, two NSSB variables were created, one for each manipulation. The variables were constructed based on the average answers to the four characteristics in each manipulation.

Table 3. Means, Standard Deviations and one-sample *t*- test by Characteristics and Manipulation in Study 3

Characteristic	Manipulation					
	Similarities			Differences		
	<i>M</i>	<i>SD</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Excellence	1.01	1.74	5.31**	.87	1.79	4.43**
Favorite	1.11	1.73	5.86**	.87	1.55	5.09**
Successfulness	.75	1.62	4.20**	.90	1.71	4.82**
Liking	1.00	1.70	5.37**	.81	1.57	4.70**
Average	.97	.82	10.81**	.86	.77	10.15**

Note. ** $p < .001$, one-sample *t* test against H_0 : bias size=.00.

A repeated measures ANOVA was conducted to test the similarities/dissimilarities effects. The results were marginally significant, indicating that bias size was greater in the similarity manipulation ($M = .97$, $SD = .82$) than in the difference manipulation ($M = .86$, $SD = .77$), $F(1,82) = 3.93$, $p = .051$.

Although marginally significant, these results definitely align with the results of Studies 1 and 2, in which similarities created greater NSSB than dissimilarities. This study provides evidence that even within the same local group, focusing on within-group similarities creates greater NSSB than focusing on within-group dissimilarities.

2.4 Discussion: the Influence of Within Group Similarities on Bias Size

Study 1 suggested that greater perceived group similarities were correlated with greater bias size. Study 2 was an experimental study that showed that groups with greater within- group similarities produce greater biases than groups with lower levels of within- group similarities. Study 3 demonstrated that even within the same

group, focusing on the group's similarities created greater biases than focusing on the group's differences. Altogether, and corresponding to the W-LOGE assumption, these results suggest that within- group similarities create greater NSSB than within-group differences.

Bruchmann et al. (2012, Experiment 2) asked their participants to create a group of healthy foods, and then describe what was similar or dissimilar between one randomly chosen food and other foods in the group. NSSB effects were found in all conditions, but (unlike the current studies) they did not differ in magnitude between the similarity/dissimilarity conditions. The authors summed up their finding as follows: "even participants who wrote about a randomly selected exemplar's similarities to other members of the same category exhibited the NSSB [...] thinking about the target's differences with the remaining items did not inflate the bias." (p. 4).

From the W-LOGE point of view, it is of course not surprising that within-group similarities did not reduce the bias, or that within group differences did not increase it. Moreover, it is not surprising that the bias was found across all conditions, since it has already found to be a highly robust bias (e.g., Chambers, 2010; Giladi & Klar, 2002; Windschitl, Conybeare, & Krizan, 2008). The robustness of the bias emerged in Studies 1-3 as well, where the bias was found in all the conditions across all the studies, and only the bias size varied between conditions.

The difference between Bruchmann et al. (2012) and the current studies might stem from a difference in the manipulations. In Study 3, I asked my participants to focus on what was similar within the group, whereas in Bruchmann et al.'s study, they asked their participants to focus on what was similar between the randomly chosen healthy food and the other healthy foods. Thinking about similarities *between* two entities (i.e., the random food, the group) might elicit a different mindset than

thinking about similarities *within* the same group. More specifically, comparing two entities may prompt greater focus on their differences, and therefore draw more attention to the $DIFF_L$, than thinking about one entity.

The influence of within group similarities on bias size was also explored in the Suls et al. (2010) studies. They showed that a singular group member, but not an aggregation of some group members, is perceived as better than the others in its group. However, in one of their studies the participants were asked to think of the *coherent impression* of aggregated group members or of a singular group member. In this case, Suls et al. found greater biases under the group cohesiveness condition than under the single group member impression condition. Returning to the W-LOGE reasoning, focusing on the within group similarities- or in other words on the coherence- within the group members should increase NSSB by allowing more attention to the $DIFF_G$ in the comparison process.

Studies 1-3 supported the W-LOGE assumption that within group similarities (vs. dissimilarities) creates greater biases. But is this always the case? It is possible that under specific conditions, within-group differences might create even greater NSSB than within group similarities. Specifically, I conjecture that when all group members are perceived as "flawless", that is, as having only great virtues and no vices at all, then focusing on their unique "perfect plus" qualities in which every group member stands out even against the other "perfect" members of the group may create a greater NSSB than focussing on the qualities in which all group members share their perfection. The difference between such a flawless group and other "positive but less than perfect" groups (which are of course the more common case) is that in the "flawless" group any unique "perfect- plus" quality in a given group member is perceived as a sheer bonus that is not offset by some possible less than perfect quality.

Obviously, in most positive groups, considering the unique qualities of any group member might also raise this member's other, less than perfect qualities. This speculation calls of course for further research.

Chapter 3: W-LOGE vs. Focalism

As already discussed, focalism approaches (for instance, Klar, Medding, & Sarel, 1996; Moore & Cain, 2007; Moore & Kim, 2003; Windschitl, Kruger & Simms, 2003) assume that during a comparison process between one group member and other group members, the focal entity (e.g., the singular group member under judgment) receives a greater share of attention than the other entities (i.e. the referent members or their group as a whole) in the group. Therefore, the focal entity is judged on the absolute value of the judged characteristic, even if the other group members are of equal standing on this characteristic. Consequently, every randomly selected group member can be judged as being above the group average. But what would the situation be if all the members of the same local group were judged one after the other? Clearly, focalism approaches (e.g., Chambers, Windschitl, & Suls, 2003; Klar, Medding, & Sarel, 1996; Moore & Kim, 2003) have not dealt with this question, although it should follow from focalism that if group member A receives focused attention when A is the focal target, the information gained about A's standing on the judged characteristic would probably not be totally forgotten or ignored when the limelight is shed on group member B while A is now part of the referent group; and when member C becomes the target of comparison, the knowledge of and acquaintance with A and B (now as part of the compared group) should not be lost, and so on, as the focal target continues to rotate. Assuming that all group members, on average, share the same level of positivity, as the successive comparative

judgments proceed, NSSB, which is related to a lack of sufficient attention to the corresponding standing on the judged trait of the "others in the group" should be gradually mitigated and even altogether disappear. Consequently, NSSB should be diminished or completely eliminated with successive comparisons. W-LOGE, on the other hand, makes a different prediction. If NSSB is caused by the difference between the judged group member and the external, general standard (i.e., $DIFF_G$), and if neither this difference nor its judgmental weight changes from one comparison to the other, there is no reason for NSSB (on average) to change. As already alluded to, there is some preliminary evidence for the staying power of NSSB across sequential comparative judgments of all group members from the same local group (Klar, 2002, study 4). However, this suggestive experiment requires further corroborations with even more stringent tests.

Moreover, the W-LOGE reasoning in this regard can even be taken one step further: if indeed comparative judgments under a within-group similarities induction shift, the judgmental focus on the difference between the currently judged group member and the others in the local general vis-à-vis the general standard (i.e., $DIFF_G$) should generate greater NSSB (as seen in chapter 2), and successive judgments under the similarities condition, where the positive difference of the local group from the general standard is reaffirmed and even augmented with every successive judgment, may even gradually increase NSSB with the successive judgments.

This section thus is divided into two thematic parts. The first part (Studies 4-6) test whether NSSB persists under sequential comparisons (Study 4) and whether it survives stringent testing conditions (e.g., repeating the successive judgments over more than one round, Studies 5 and 6). As already noted, persistence of NSSB under

successive judgments (let alone under more than one round of successive judgments) conflicts with the most basic assumption of focalism.

In the second part of this section, I test the hypothesis that NSSB may in fact increase with successive comparative judgments under a within-group similarity manipulation (as in Chapter 2) but not under a within group differences manipulation. Such an increased NSSB effect under similarity follows the W-LOGE assumption that the lesser the weight of $DIFF_L$ (due to the internal similarity), the greater the relative weight of $DIFF_G$. When the local judged group is distant from the general standard, the greater the realization how the currently judged group member (and the entire group to which this member is similar) is above (in the case of NSSB) or below (in the case of NSIB), and the greater the nonselective biases should be. Increase in the biases under successive comparative judgments is clearly inconsistent with focalism approaches (and with common sense). Increases in the biases under the *within-group similarity* condition cannot be accounted for by the unique-attribute approach, since based on this approach, realizing how similar the currently judged member is to the other in the group should gradually decrease the biases.

3.1 Study 4: Reviewing All Group Members in a Group of Four Books

This study examined the magnitude of the NSSB as a function of the order in which each group member was successively judged. In this case, participants were asked to judge all the group members in a group of four liked books. This study wishes to test whether the persistence of NSSB in a single study (Klar, 2002; Study 4) in which the bias was persevered when participants judged their peers, one-by-one vis

a-vis group average. In the current study participants judged four liked books which they themselves listed.

3.1.1 Method.

3.1.1.1 Participants.

Seventy-three participants (41 women, $M_{\text{age}} = 30.96$, $SD = 14.09$) took part in the study during Israeli Book Week 2013, in exchange for entry into a raffle with four prizes of 50 NIS (~\$12) each.

3.1.1.2 Measurements and procedure.

Participants were given the questionnaire and a small plastic cup with four slips of paper in it. On the questionnaire, participants were asked to list four books they liked, and then to write these names on the slips of paper, put them in the cup and scramble them. They were then asked to choose one random slip at a time, and to answer one *comparative question* about the book written on the slip. Each book, chosen at random, was judged on one characteristic (which varied across books). Characteristics were identical to those used in all previous studies and were presented in random order. Upon completion of the experimental tasks, participants were thanked and asked to write their names on a different piece of paper to take part in the raffle.

3.1.2 Results and discussion.

3.1.2.1 Bias magnitude.

Table 4 presents the means, standard deviations and one-sample t-test for each of the four targets judged (arranged by order of judgment). As Table 4 indicates, NSSB was found for all four targets (all p 's < .001).

Table 4. *Means, Standard Deviations and one-sample t-tests for each target (by order of judgment) in Study 4*

Order	Bias Magnitude		
	<i>M</i>	<i>SD</i>	<i>t</i>
1 st	.99	1.69	4.99**
2 nd	.93	1.76	4.51**
3 rd	1.29	1.78	6.17**
4 th	.88	1.59	4.71**

Note. ** $p < .001$, single-sample t test against H_0 : bias size= .00

3.1.2.2 Order effect.

Did the magnitude of the NSSB change - either increase or diminish - as a function of the order in which the target was judged? A repeated measures ANOVA with four variables (order) was conducted to answer this question. This analysis revealed neither an order effect ($F < 1$) nor a linear trend of order ($F < 1$); the bias did not decrease from the first target judged to the last.

These results suggest that the magnitude of the bias did not diminish when judging more than one member of the local group, even though the task explicitly focused the participants' attention on each member of the local group. However, an alternative explanation for this finding is that given the fact that the participants were not initially aware that they would be asked to judge all the group members of the local group, after committing NSSB for the first judged group member, they were "locked" into their inflated comparative judgments which had set an initial high standard for all successive comparative judgments (e.g., "I judged member A to be above the group's average, but in fact member B is not less worthy than member A, so member B should also be given the same status"). Thus, the fact the NSSB was

maintained throughout all the successive judgments could be explained in terms of the participants' inability or unwillingness to correct the first inflated comparison. Study 5 provided the participants with an opportunity to correct this presumed bias by enabling them to start this process anew after the first round of comparative judgments when they were fully and equally aware of the status of all group members and when they were also better aware from the beginning of the comparative nature of the task.

3.2 Study 5: All Group Members were Reviewed Twice

In this study, participants were asked to judge all members in the same local group twice in two trials. Meaning, they were asked to consecutively judging the members one-by-one, and then repeating this process a second time. Thus, if in the first round of consecutive judgments, participants were "locked" by the inflated comparative judgments of the first judged group members (since they could not retreat from these judgmental norms they themselves created), then by providing them with a second opportunity to revise their judgments (following the completion of the first round of comparative judgments) they were free to allot a new set of judgments which were better informed by the increased familiarity of all group members, and at the same time were freed of the inflated norms that might have affected their first round of judgments.

3.2.1 Method.

3.2.1.1 Participants.

Fifty-seven participants (35 women, $M_{\text{age}} = 25.30$, $SD = 2.85$) were asked to participate in this study during TAU Students' Day 2012, and received 10 NIS (~\$2.50) for participating.

3.2.1.2 Measurements and procedure.

As in Studies 1 and 2, participants were asked to participate in either an experiment about music or about movies, based on their interests. Then they were given a questionnaire about their chosen topic and a small plastic cup with four slips of paper in it. In the questionnaire, participants were instructed to create a group of four liked movies or books, write their names on the four slips, put them in the cup and scramble them. Then they were asked to answer four *comparative questions*. Each participant judged each book or movie, chosen at random, along one characteristic.

The characteristics were identical to those used in previous studies, and were presented in random order to ensure that the order in which the stimuli were rated was independent of the characteristic they were judged on. Next, participants were told: "now, you will be asked to repeat this procedure again", and instructed to put the slips of paper in the cup again. Then they were asked to repeat the procedure: to take one slip out of the cup at a time, and to judge the listed item on single characteristic. The characteristics were identical to those from the first trial, but appeared again in random order (partially ensuring that a given book/movie was not rated on the same characteristic on the two trials). Upon completion of the experimental tasks, participants were thanked and received 10 NIS.

3.2.2 Results and discussion.

3.2.2.1 Bias magnitude.

Table 5 presents the means, standard deviations and one-sample t -tests for each target judged (by the order in which it was judged on the two trials). As Table 5 indicates, NSSB was found for all targets and irrespective of order (all p 's < .01).

Table 5. Means, Standard Deviations and one-sample t -tests for each target (by order of judgment) in Study 5

Bias Magnitude				
	Order	M	SD	t
First Round	1 st	.67	2.03	2.50*
	2 nd	.70	1.75	3.43**
	3 rd	.98	1.65	4.15**
	4 th	1.35	1.78	5.35**
Second Round	1 st	1.09	1.63	4.78**
	2 nd	.89	1.60	4.11**
	3 rd	1.21	1.70	5.11**
	4 th	.89	1.86	3.76**

Note. * $p < .01$, ** $p < .001$, single-sample t test against H_0 : bias size = .00.

3.2.2.2 Order effect.

A repeated measures ANOVA with eight variables (order) showed no order effect between the different comparative judgments ($F(7, 392) = 1.11, p = .36$), or a linear trend ($F(1, 56) = 2.675, p = .11$).

3.2.2.3 Order effect between two rounds of judgments.

In order to test whether there was a difference between the first and second rounds of judgments, a two way repeated measures ANOVA with round number (first, second) and order (first, second, third, fourth) was conducted. There were no main effects for either group ($F(1, 56) = 1.41, p = .24$) or order ($F < 1$), or any interaction between group and order ($F(3, 168) = 1.19, p = .32$).

These results are once again showed that the bias will remain intact across all sequential comparative judgments. In this study, bias remained stable even when participants were asked to judge the same group members again, immediately after having judged them previously. Thus, these results did not support the "being locked in" interpretation which claims that in the first round of comparisons, following the overly generous judgment given to the first target, participants continue to award overly generous comparative judgments to successive group members due to the high norm naively created while judging the first group member. Re-judging all group members, when freed from this alleged early naïveté, did not change the results.

However, it could be still claimed that participants in the second trial were motivated to rate the same target consistently across both trials, and thus they did not change their ratings between trials. In order to examine this possibility, study 6 used a similar procedure, but instead of judging the same group twice, on each trial the participants judged a different group.

3.3 Study 6: Reviewing All Group Members in Two Different Groups

This study examined whether NSSB would diminish when participants made successive comparative judgments within two *different* groups one after the other (rather than judging the same group twice, as in Study 5). Conducting within group comparisons in two different groups should help participants realize that all group

members are to be compared to each other within the local group during the first trial (i.e., the first group judged); thus participants should take this into consideration in the second trial (i.e., the second group judged). Thus, if in the second set of comparative judgments in Study 5 (in which participants were provided with a second opportunity to comparatively judge the same group members anew) participants failed to correct NSSB, because participants felt they were obligated to the prior judgments they provided (or wished to appear consistent with these judgments), by judging a completely new group with the insights presumably gained by the first round of judgments, participants were completely liberated from any fidelity considerations.

Study 6 was designed to test this issue, this time with different content: liked foods (see Gilady and Klar, 2002).

3.3.1 Method.

3.3.1.1 Participants.

There were 82 participants (43 women, $M_{\text{age}} = 22.33$, $SD = 3.72$) who took part in this study during TAU Open Day 2013, an event organized by the university for potential new students. Each participant received 10 NIS (~\$2.50) for his or her participation.

3.3.1.2 Measures and procedure.

The experiment was introduced to the participants as a study on food judgments. Participants were given a questionnaire and two small plastic cups with four slips of paper in each cup. On the questionnaire, participants were instructed to choose four foods they were highly familiar with and strongly liked, to write the names of these foods on the four slips of paper, put them in one of the plastic cups, and scramble them. Then, they were asked to randomly take out one slip of paper, and answer one *comparative question* at a time. The characteristics revolved around

qualities of taste preference: 1) “great,” 2) “love to eat it”, 3) “tasty,” and 4) “I “feel like” eating it”. As in all the studies above, the four characteristics appeared in random order.

After participants finished answering the four comparative questions, they were asked to create another group of four foods they were highly familiar with and strongly liked, to write the names of these foods on the four slips of paper in the second cup and then repeat the procedure described above with this second group of liked foods. Participants were asked to choose different foods from those they had already chosen on the first trial. Upon completion of experimental tasks, participants were paid 10 NIS and thanked for participation.

3.3.2 Results and discussion.

3.3.2.1 Bias magnitude.

Table 6 presents the means, standard deviations and one-sample t-tests for each comparative judgment, arranged by judgment order. As Table 6 indicates, non-selective superiority biases were found for each of the 8 targets judged (all p 's < .001).

Table 6. Means, Standard Deviations and one-sample *t*-tests for each target (by order of judgment) in Study 6

Bias Magnitude				
	Order	<i>M</i>	<i>SD</i>	<i>t</i>
First Round	1 st	.91	1.87	4.44**
	2 nd	1.01	1.82	5.06**
	3 rd	1.05	1.92	4.94**
	4 th	.88	1.93	4.13**
Second Round	1 st	.98	1.83	4.82**
	2 nd	1.12	1.74	5.84**
	3 rd	1.22	1.83	6.03**
	4 th	.93	1.86	4.50**

Note. ** $p < .001$, single-sample *t* test against H_0 : bias size= .00.

3.3.2.2 Order effect.

A repeated measures ANOVA with eight variables (order) indicated that there was no order effect ($F < 1$) or linear trend ($F < 1$).

3.3.2.3 Order effect between two group judgments.

As before, a two-way repeated measures ANOVA with group (first or second) and order within group (first, second, third, fourth) was conducted. There was no effect for group, order, or their interaction (all F 's < 1). These results might suggest additional support for the robustness of NSSB. Even during the second trial, when

participants were more experienced and better aware of the comparative nature of the judgments, all group members were still judged as better than the group average.

These results are consistent with those from Studies 4 and 5, all of which confirmed that NSSB prevails even under highly stringent tests. In the following studies 7 -9 the W-LOGE prediction will be directly contrasted with the focalism and unique attribute accounts.

3.4 Can Bias Size Increase as a Function of Order, Under the Influence of Greater Within Group Similarity?

Studies 4, 5 and 6 showed that bias size does not decline with sequential comparative judgments. In all these three studies, there was a bias in each judgment- from the first to the eighth- and its size remained similar across all judgments. Nevertheless it remains unclear whether there are conditions in which reviewing the group member will cause even an increasing NSSB effect.

W-LOGE was consistently found that under within group similarities rather than dissimilarities, as shown in Chapter 2, NSSB increases. This was explained by the fact that focusing on the common positive attributes of the entire local group (e.g., the four liked books) shifted the focus of the comparative judgment to the contrast between the currently judged liked group members together with the other members of the liked group against the lower, general standard (e.g., ordinary books). This led to a greater NSSB effect than in the dissimilarities condition, where the focus was on what makes each group member different from the others in the group. This reasoning can be taken one step further: if the positive group members are judged primarily on what make them *collectively* great (i.e., in the similarities condition) the greatness of the previously judged group members may add up to the positivity of the

currently judged member. In other words, every virtue brought up to attest to the superiority of the previously judged local group member vis-à-vis the general standard may also be attached to the subsequently judged group member by the power of their collective similarity. Consequently (and paradoxically), with successive comparative judgments, the difference between the local group and the general standard (i.e., $DIFF_G$) gradually becomes even more marked. This may result in a gradual increase in NSSB. However, this gradual increase should only be found when group members are judged primarily on what makes them collectively (rather than uniquely) great. That is, the effect should be found in the similarities rather than the dissimilarities condition. Under the dissimilarities condition, the focus is on what makes each member different from the others in the local group. Thus, whatever virtues are attached to the previously judged group members, these merits are not inevitably drawn into the judgment of the subsequently judged group members. Thus, no incremental increase is predicted in this condition.

The gradual increase in the non-selective biases proposed by W-LOGE clearly contrasts with the unique attribute reasoning that the biases are mainly due to the distinctive attributes of each of the individual members of the group. According to this reasoning, the within-group dissimilarities (and not the similarities) condition can leave the sequential bias intact (or even let it increase). Thus, the following studies should enable a contrast between W-LOGE and both focalism (which cannot account for the persistence of the non-selective biases under any condition) and unique attribute (which cannot account for the gradual increase of the biases under the similarities condition).

Another novel feature of Study 7 is that it deals with the complementary comparative bias that was originally identified by Klar and colleagues (e.g., Giladi &

Klar, 2002; Klar, 2002; Klar & Giladi, 1997; Klar, Medding & el, 1996) and was corroborated by others (e.g., Chambers, 2010; Moore & Cain, 2007). According to the non-selective inferiority bias (NSIB), in negative local groups almost every group member is judged as worse than the others in the same negative group, below the group average on positive traits and above the group average on negative traits. According to LOGE and W-LOGE, NSIB (like NSSB) is caused by $DIIF_G$, the difference with the general standard which is negative in the case of negative groups. Just like NSSB, it is predicted that under a similarities condition, in which the negativity of the judged group member is collective (rather than unique individually), sequential comparative judgments may lead to a gradually augmented negativity of the currently judged member (together with the entire local group) and consequently to increased NSIB with repeated judgments. This was tested in Study 7.

3.5 Study 7: Influence of Within-Group Similarities/Dissimilarities on the Order Effect in Negative Groups

In this study, different weights of the $DIFF_G$ were manipulated by focusing on group similarities versus dissimilarities. This manipulation was adapted since Study 3 already provided evidence that the similarities / dissimilarities manipulation influenced the focus on $DIFF_G$.

3.5.1 Method.

3.5.1.1 Participants.

There were 124 participants (95 women, $M_{\text{age}} = 22.12$, $SD = 5.05$) who took part in the study during TAU Open Day 2014. Each participant received 10 NIS (~\$2.50) for their participation.

3.5.1.2 Measurements and procedure.

Similar to previous studies, participants received a questionnaire and a cup with four slips of paper. In the questionnaire, participants were instructed to create a group of four foods they disliked and found disgusting. Then, they were asked to either write about the group's similarities or differences, in a manipulation that was similar to Study 3 (and adapted from Mussweiler, 2003). The instructions were: "Now, imagine that you need to explain to someone else what it is in these foods that you dislike. Please write a detailed description that focuses on what is similar [different] about these disliked foods that make them disliked in your opinion. Please write at least four things that make these foods similar [different] in what makes them disliked and disgusting foods in your opinion". Then, participants answered four *comparative questions*. Characteristics in this study were negative: "revolting," "yucky," "disgusting" and "sickening." As previous NSIB research has shown, in negative (e.g., disliked) groups, group member are generally judged as being more negative than the others in the group. As in all previous studies, the four characteristics appeared in random order. Upon completion of the experimental tasks, participants were paid 10 NIS and thanked for their participation.

3.5.2 Results and discussion.

3.5.2.1 Bias magnitude.

Table 7 presents the means, standard deviations and one-sample t test values for each individual judgment, sorted by judgment order. As Table 7 indicates, NSIB, the non-selective inferiority bias (i.e., each member of the negative group judged to be worse than the other members of its group) was found for ratings of all group members, irrespective of the order in which they were judged (all p 's < .001).

Table 7. *Means, Standard Deviations and one-sample t -tests for each target (by order of judgment) in Study 7*

Order	Bias Magnitude		
	M	SD	t
1 st	.60	2.27	2.96**
2 nd	.90	2.14	4.66**
3 rd	1.32	2.17	6.80**
4 th	1.25	2.07	6.71**

Note. ** $p < .001$, single-sample t test against H_0 : bias size = .00.

3.5.2.2 Order effect.

There was a marginally significant effect of order of judgment ($F(3,366) = 2.57, p = .054$), as well as a significant positive linear order trend ($F(1,122) = 6.22, p < .05$).

3.5.2.3 Order effect as a function of the manipulation.

A separate examination of the effects in the similarity and difference manipulations showed that NSSB only increased linearly with order on the similarity manipulation ($F(1, 61) = 6.17, p < .05$), but not on the difference manipulation ($F(1,61) = 1.01, p = .32$). However, two way repeated measures ANOVA with order

(first, second, third, fourth) and manipulation (similarity, differences) as independent variables, and bias size as dependent, didn't find an interaction between order and manipulation ($F(3, 366) = 1.98, p = .12$). Figure 1 depicts these trends.

Figure 1. Bias size by order and similarity manipulation in Study 7.

These results indicate that the order effect can gradually increase NSIB in the similarities condition, when greater focus is given to the $DIFF_G$, as W-LOGE predicts. However, these results were obtained with the NSIB effect which is not the main thrust of the current work. Could similar results be obtained with NSSB?

3.6 Study 8: Influence of Within-Group Similarities/Dissimilarities on the Order Effect in Positive Groups

Study 8 was designed to test the possibility of gradually increasing biases in positive (rather than negative) group. It manipulated similarities / dissimilarities in positive groups to explore whether the bias indeed consistently increases when more attention is paid to the $DIFF_G$.

3.6.1 Method.

3.6.1.1 Participants.

There were 154 participants (75 women, $M_{\text{age}} = 29.29$, $SD = 13.71$). Seventy-five were asked to participate in an experiment about movies before a film screening at the Tel Aviv cinémathèque. An additional 75 participants were asked to participate in an experiment about music during a visit to a CD store. All the participants received 10 NIS (~\$2.50) for their participation.

3.6.1.2 Measurements and procedure.

As in previous studies, participants were given a questionnaire about movies (in the cinema sample) or about songs (in the CD store sample), and a small plastic cup with four slips of paper in it. Participants compiled a group of four movies (in the cinema sample) or songs (in the CD store sample) that they liked. Then they were instructed to write about what was similar or different between the group members, using the same instructions as provided in Study 3 (and repeated in Study 7). After completing the similarity or dissimilarity manipulation, they were asked to answer four *comparative questions*. The characteristics were all positive and they were identical to those used in Studies 1-6, and appeared in random order.

3.6.2 Results and discussion.

3.6.2.1 Sample differences

Both the music ($N=77$) and movies sample ($N=77$) were similar on their average bias size ($F < 1$). A two way ANOVA with questionnaire type (music/movies) and manipulation kind (similarity / differences) on bias size been showed a non-significant interaction ($F < 1$). Therefore, the samples were combined.

3.6.2.2 Bias magnitude.

Table 8 presents the means, standard deviations and one-sample t-test for each individual judgment, sorted by judgment order. As Table 8 indicates, the NSSB was found for all question numbers (all p 's < .001).

Table 8. *Means, Standard Deviations and one-sample t-tests for each target (by order of judgment) in Study 8*

Order	Bias Magnitude		
	<i>M</i>	<i>SD</i>	<i>t</i>
1 st	1.16	1.82	7.94**
2 nd	1.31	1.66	9.74**
3 rd	1.12	1.65	8.45**
4 th	1.34	1.69	9.89**

Note. ** $p < .001$, single-sample t test against H_0 : bias size= .00

3.6.2.3 Order effect.

There was no general order effect ($F < 1$).

3.6.2.4 Order effect as a function of the similarities / differences manipulation.

A separate examination of the effects in the similarity and difference manipulations showed that NSSB only increased linearly as a function of order in the similarity manipulation ($F(1, 78) = 4.86$, $p < .05$), but not in the difference manipulation ($F(1, 74) = 2.16$, $p = .15$). Two way repeated measures ANOVA with order (first, second, third, fourth) and manipulation (similarity, differences) as independent variables and bias size as dependent, found a marginal significant interaction between order and manipulation ($F(3, 456) = 2.43$, $p = .065$) Figure 2 depicts these trends.

Figure 2. Bias size by order and similarity manipulation in Study 8.

3.7 Study 9: Increased Order Effect in Positive Groups Using the Homogeneity/Heterogeneity Manipulations

Studies 7 and 8 demonstrated increases in NSIB and NSSB using within-group similarities / dissimilarities manipulations. In Study 9 a different manipulation, the homogeneity/heterogeneity manipulation previously used in Study 2 was applied. Could this manipulation, which is also intended to shift judgmental focus from the internal, within group differences ($DIFF_L$) to the external differences ($DIFF_G$), produce the same line of results?

3.7.1 Method.

3.7.1.1 Participants.

There were 337 participants (185 women, $M_{age} = 24.67$, $SD = 4.07$) who were asked to participate while they were studying in the libraries at TAU campus. Participants were offered entry in a raffle for five prizes of 50 NIS (~ \$12) in exchange for their participation.

3.7.1.2 Measures and procedure.

Similar to Study 2, participants were asked to compile a group of four movies/musical pieces they liked, either from different genres (heterogeneity

condition) or from the same genre (homogeneity condition). Then, they answered four *comparative questions*. The characteristics were identical to those in Studies 1- 6 and 8, and appeared in random order.

3.7.2 Results and discussion.

3.7.2.1 Sample differences.

Both the music (N= 171) and movies sample (N=166) were similar on their average bias size ($F < 1$). A two way ANOVA with questionnaire type (music/movies) and manipulation kind (homogeneity / heterogeneity) on bias size been showed a non-significant interaction ($F < 1$). Therefore, the samples were combined.

3.7.2.2 Bias magnitude.

Table 9 presents the means, standard deviations and one-sample t-test for each individual judgment, sorted by judgment order. As Table 9 indicates, the NSSB was found for all question numbers (all p 's $< .001$).

Table 9. *Means, Standard Deviations and one-sample t-tests for each target (by order of judgment) in Study 9*

Order	Bias Magnitude		
	<i>M</i>	<i>SD</i>	<i>t</i>
1 st	1.00	1.76	10.41**
2 nd	1.06	1.65	11.83**
3 rd	1.02	1.75	10.68**
4 th	1.26	1.73	13.35**

Note. ** $p < .001$, single-sample t test against H_0 : bias size= .00

3.7.2.3 Order effect.

There was no general order effect ($F(3, 1005) = 1.66, p = .17$).

3.9.2.3 Order effect as a function of the manipulation.

A separate examination of the effects of the homogeneity and heterogeneity manipulations showed that non-selective superiority biases increased linearly as a function of order only in the similarity-focus condition ($F(1, 165) = 5.65, p < .05$), but not in the differences-focus condition ($F < 1$). Two way repeated measures ANOVA with order (first, second, third, fourth) and manipulation (similarity, differences) as independent variables and bias size as dependent, did not find interaction between order and manipulation ($F(3, 1005) = 1.01, p = .39$) Figure 3 depicts these trends.

Figure 3. Bias size by order and similarity manipulation in Study 9.

3.8 Discussion: Sequential NSSB effects

This chapter examined the magnitude of bias size when judging all group members one by one against the group's average. Its first section demonstrated that the bias persists when all group members are sequentially judged; when two rounds of judgments are carried out (with the option to provide new unbiased judgments; and when second round of judgments, involving a new group, is conducted following the first rounds. None of stringent "awareness raising" manipulations made the bias to

disappear or even diminish. Studies 4, 5 and 6 examined this issue and provided evidence suggesting that it is hard to eliminate the order effect: in all these three studies, bias size did not diminish across all questions. This was the case when participants had the opportunity to correct the bias in a second round of comparative judgments of the same group (in Study 5) and even of a new group (in Study 6).

These consistent results support the argument that the bias is not easily eliminated. This effect is illogical: Evidently, a situation in which each group member, one-by-one, is perceived as better than their group, is an explicit violation of the basic principle of transitivity (von Neumann & Morgenstern, 1947). However, W-LOGE interpretation of this results suggests that the principle of transitivity is not necessarily broken if the actual comparison is against an external reference, compared to which all group members can be perceived as being superior to others.

It could be claimed that the results of Studies 4-6 demonstrate "no change" effects, and therefore null effects (e.g., Cook & Campbell, 1979; Frick, 1995; Greenwald, 1975). This interpretation is questionable in the current case (see also Cashen & Geiger, 2004; Cortina & Folger, 1998): the persistence of the non-selective superiority bias, despite the augmented familiarity with every additional comparative judgment which provided the judges with active and powerful evidence that the others in the group were also better than "the others in the group" can be viewed as counter-intuitive and even striking. They show that a strong violation of transitivity and in fact of rationality is resistant to correction.

However, even if one adopts the conservative view that the persistence of NSSB along all successive judgments is a null effect, W-LOGE makes even a bolder prediction; namely that the comparative biases, NSSB (and NSIB) can even increase with successive judgments when greater weight is given to the $DIFF_G$ during a

comparison process. Studies 7, 8 and 9 used within-group similarities manipulations to affect the salience of the difference between the judged local group member (and the others in the group) and the general standard (i.e., the $DIFF_G$). The results supported the W-LOGE prediction: in the similarities, but not in the dissimilarities condition, the non-selective biases increased with successive judgments. These are the conditions in which judgmental weight is supposed to shift from the internal to the external differences, as demonstrated in the previous chapter.

The persistence of the comparative biases has practical as well as theoretical implications. It has clear effects on the ability to choose from groups or from choice sets. A choice is a process of preferring something over something else (Samuelson, 1953), and thus forming preferences might be difficult or biased when all group members are judged as better compared to all the other group members. Further investigations are needed to explore the influence of sequentially comparing all group members from the same group to all other members in actual choices. For instance, if Anna needs to choose only one musical piece to play at her party, how can she truly choose if there are four highly liked pieces to choose from, and each time she asks herself if this particular piece is better than the others her answer is positive?

Another line of research might inquire under what conditions the bias is reduced over successive comparative judgments. I predict that when a great judgmental weight can be assigned to $DIFF_L$ during the comparison process, this internal focus may create a decrease in NSSB as a function of judgmental order. For instance, if people are forced to restrain their excessive comparative judgments given that they must allocate some limited resource among all group members, the last group members would naturally receive a considerably lesser share than the first group members. By implication, training judges to think about within-group

comparative judgments in terms of allocation of a limited resource might enhance their awareness of the internal differences within the group (i.e., $DIFF_L$), and this might reduce the sequential bias, or even the bias from the start. Further research can explore this line of reasoning.

Chapter 4: General Discussion

This research contrasted W-LOGE with unique attribute theory (in Chapter 2), and W-LOGE and focalism (in Chapter 3). Chapter 2 showed the influence of within-group similarities on NSSB. The three studies reported in this chapter showed that in line with the W-LOGE hypothesis, under a *within-group similarities* condition, the bias was greater than under a *within-group dissimilarities* condition. In Chapter 3, Studies 4 to 6 showed that the comparative bias does not diminish when all the local group members are reviewed one after the other. Studies 7 to 9 showed that by giving greater weight to the $DIFF_G$, (using a within-group similarities manipulation) reviewing all group members one by one can even increase the bias size as a function of judgmental order.

The studies presented in this work support the W-LOGE hypotheses. I predicted that reducing the internal differences between the local group members (i.e., what makes each group member *uniquely* positive) leaves more room for the external differences between this group member and the (less positive) general standard (i.e., $DIFF_G$) and this diversion of focus from the within group differences to the difference between the group as a whole and the general standard consequently influences NSSB size. Chapter 3 provided evidence for this hypothesis. Studies 7-9 in Chapter 3 showed that giving greater weight to the $DIFF_G$ via the similarity focus manipulation can even lead to increasing NSSB when the latter group members are perceived as

even comparatively better than the former. This "accelerated NSSB effect" can only occur when more weight is given to the $DIFF_G$ during the comparison process. More specifically, the positivity of the judged group is augmented each time that a group member is judged and the positive distance vis-à-vis the general standard becomes larger with each successive comparative judgment.

These results lead to the conclusion that the weight attributed to $DIFF_G$ during the comparison process plays a major role in NSSB size, in both singular and sequential comparative judgments. All this might imply that in contrast to other internal accounts which assume that NSSB occurs exclusively within the local group, W-LOGE shows that the NSSB also occurs by an external mechanism.

4.1 What About Additional Alternative Internal Explanations?

The studies reported here contrasted the W-LOGE approach, an outgrowth of the LOGE account (Giladi & Klar, 2002), with the unique attributes (Chambers, 2010) and focalism accounts (e.g., Chambers & Suls, 2007; Klar & Giladi, 1997; Moore & Kim, 2003; Moore & Small, 2007; Windschitl, Kruger & Simms, 2003).

However there are several other internal accounts of NSSB that were not explicitly explored in this work. In this section I will present and attempt to discuss them in the light of the present results or utilize them to point out possible limitations on the current W-LOGE account, which call for further investigation.

4.1.1 Informational Differences

Some internal NSSB accounts focus on the way in which informational differences between one group member and the other members in the group can produce NSSB. These accounts assume that a better known group member will be judged in more extreme terms than the other, less known members.

Specifically, Moore and Small (2007) suggested the "differential regression" account. In this reasoning, whenever people are more familiar with one entity in the group than the others, they will tend to judge this entity more extremely and make less extreme (i.e., more regressive) judgments regarding the lesser-known entities. A similar explanation known as "rational discounting" was put forward by Kruger, Windschitl, Burrus, Fessel and Chambers (2008). They posited that judges focus rationally on the knowledge most readily available to them. Therefore, they will focus on the best known entity and use it to conclude about less known entities in the group. Kruger et al. (2008) showed that the bias is reduced when people are exposed to the same amount of knowledge about the referent as well.

However, the information explanation is extraneous to the occurrence of NSSB as demonstrated in the current work, for several reasons. First, the random nature of the selection of the judged group members clearly limits the value of informational explanations. It is unreasonable to assume that each randomly chosen group member is better known than the other group members. Second, as demonstrated in the current studies, the NSSB was retained even when all the group members were judged one-by-one vis-à-vis the others in the group and even when this procedure was repeated twice; hence although the amount of knowledge about the non-focal members gradually increased, and towards the end of the first round of comparisons was complete, the NSSB effect remained intact. Moreover, Klar and Giladi (1997) showed that even an anonymous and therefore unindividuated TAU student was judged as better than the average TAU student. In these studies, judges could have a better grasp of the quality of the average TAU student than that of an anonymous TAU student but nevertheless the less known group member was judged as above the group's average.

4.1.2 Individual- Group Differences

Another line of reasoning regarding NSSB focuses on the differences between a singular group member and an aggregate entity composed of a collection of group members or the group as a whole. Sears' (1983) person positivity bias suggested that each individual person will be judged more favorably than an aggregation of persons; thus, according to this approach, every individualistic marker will make the judged entity more positivity evaluated compared to a group or a group's representation. Krizan and Suls (2008) also proposed a similar explanation they dubbed the "diffuse general group", and suggested that it simply is easier to create an impression about a single group member than about a group as a whole, which is a larger and more diffuse entity. Still another individual- group explanation deals with abstraction levels: Price (2001) suggested that individuals are always judged to be better than their group, due to the fact that individuals are less abstract entities than their groups.

The results of Studies 1-3 make a case for the opposite possibility that the entire positive group can sometimes be superior to its individual members. That is, thinking about a positive group as a whole (via the within group similarities manipulation) may create an even larger NSSB than thinking about singular group members as individuals (via the within group differences manipulation). In particular, Study 3 showed that even within the same group, focusing on the group as a whole (via the similarities manipulation) created greater biases than focusing on the individual group members (via the dissimilarities condition). These results are problematic for the abstraction level explanation which assumes that the group is more abstract than the individuals and therefore less desirably judged.

In contrast to these internal accounts, our reasoning is that the bias does not necessarily occur due to the difference between the individual and the local group as a

whole (i.e., DIFF_L), but due to the difference between the group as a whole and the general standard (i.e., DIFF_G). Therefore, when the group is positive compared to the general standard, individual group members, some group members, or even the group as a whole can be judged as positive compared to the general standard. Greater within-group similarities and focusing on what is common to all the group members might in some cases create greater biases since it might better emphasize the difference between the local group and the general standard.

The results reported in the Suls et al. (2010) studies provide additional support for this possibility. Suls et al. showed that a singular group member was perceived as better than the others in its group, while an aggregation of some group members were not judged as better than the group. However, when participants were asked to think of the *coherent impression* of aggregated group members or a singular group member, greater biases were found under the group cohesiveness condition than under the single group member impression condition. They summed up their results by saying: "The results of both conditions support the idea that a set of ad hoc exemplars serving as a target will receive more weight than a single-item referent if judges are given preliminary instructions to think of the exemplars as a cohesive entity." (p. 69). This somewhat unexpected result by Suls et al (2010) can be easily explicated in terms of the W-LOGE reasoning. Specifically, it follows from Suls et al. (2010) that it is not the focus on the group that creates larger NSSBs, but rather the focus on the group *cohesiveness*. Or, in W-LOGE terms, it is the focus on the within-group *similarities*.

However, according to W-LOGE, the within-group similarities condition will only increase bias size when the group is judged as positive compared to the general standard. Windschitl, Conybeare and Krizan (2008) conducted two experiments in which participants were asked to imagine that they were given a sofa for free: they

could either choose to get one specific sofa, or get one sofa selected at random from a group of four sofas. Participants in both experiments judged the single sofa to be less desirable than the group of four sofas, and they also preferred to get a sofa selected at random from the group of four sofas. However, consistent with the W-LOGE account this occurred only in the attractive sofa condition. No effect was found in the fair sofas condition. Niewiarowski, Karyłowski, Szutkiewicz-Szekalska and Cypryńska (2014) replicated the Windschitl et al. effect and also found that the larger the group, the greater the effects.

Thus, overall, the evidence for the notion that positive individuals are always better than their positive groups is mixed at best. According to W-LOGE, however, both positive individuals and positive groups can generate a NSSB as long they are superior to the general standard. Further research examining the W-LOGE hypothesis about NSSB reduction within fair groups is obviously needed.

In conclusion, I briefly reviewed some additional alternative explanations for the NSSB phenomenon. All these explanations are internal explanations because they assume that the bias is due to the comparative processes within the local group. Although this might be the case, the results presented in this section favor the W-LOGE account, which also include external components of the bias.

4.2 Limitations & Further research

This work presented the W-LOGE, a better specified version of LOGE theory (Giladi & Klar, 2002). According to W-LOGE, $DIFF_L$ and $DIFF_G$ can receive different judgmental weights during the comparison process. In this work I attempted to vary these relative weights by using within- group similarities (vs. dissimilarities) manipulations. These manipulations indeed led to the theoretically predicted (and

counter intuitive) effects of W-LOGE. However, in the current work, the "weights" concept remained an implied (or latent) rather than a directly assessed construct. Further research should look for 'process' evidence (Hogarth, 1981), such as eye-movement tracking methods to identify how participants' attention is allocated when both internal and external visual stimuli are present (see for instance Manning, Ethell & Donovan, 2004). These methods might make it possible to determine whether participants pay different amounts of attention to the internal (i.e., $DIFF_L$) and the external (i.e., $DIFF_G$) in different experimental conditions, and whether degree of attention is related to the magnitudes of the biases.

Variations in the magnitudes of the biases were obtained in the current studies by varying the internal similarity / dissimilarity as a means to change the $DIFF_L$ - $DIFF_G$ balance. As already discussed, the magnitude of the biases is also affected, according to LOGE, by the distance between the entire local group and the general standard (i.e., $DIFF_G$). This was demonstrated in one study (Giladi & Klar, 2002; Study 6). Further research in this direction should also help sketch a fuller picture regarding the non-selective biases and their origins.

4.3 Conclusion

This research aimed to extend the utility of LOGE theory as an "external" account of non-selective biases and contrast it with two leading "internal" accounts of these biases, the focalism and unique attribute approaches by adding the construct of judgmental weights and manipulating it via within group similarities and dissimilarities. These variations reliably affected the magnitude of NSSB, consistent with the LOGE and W-LOGE predictions. The robustness of NSSB to successive comparative judgments and correction opportunities and the incremental increase of

both NSSB and NSIB in the successive judgments under the similarity condition further challenged the internal accounts, and further reinforced the "external" view. Future research should attempt to investigate the use of the general standard, and ways to reduce its use to make more rational judgments and decisions. Meanwhile, Anna will probably continue judging each of her most liked musical pieces as better than the other pieces in her shortlist of most liked musical pieces.

References

- Alicke, M. D. (1985). Global self-evaluation as determined by the desirability and controllability of trait adjectives. *Journal of Personality and Social Psychology*, 49, 1621-1630.
- Brown, J. D. (2012). Understanding the better than average effect: Motives (Still) Matter. *Personality and Social Psychology Bulletin*, 38, 209-219.
- Bruchmann, K., Suls, J., Lee, S., Rose, J. P., Krizan, Z., & Windschitl, P. D. (2013). Searching for the limits and explanations of the nonselective superiority bias. *Social Psychological and Personality Science*, 4, 124-130.
- Cashen, L. H., & Geiger, S. W. (2004). Statistical power and the testing of null hypotheses: A review of contemporary management research and recommendations for future studies. *Organizational Research Methods*, 7, 151-167.
- Chambers, J. R. (2010). Why the parts are better (or worse) than the whole: The unique-attributes hypothesis. *Psychological Science*, 21, 268-275.
- Chambers, J. R., & Suls, J. (2007). The role of egocentrism and focalism in the emotion intensity bias. *Journal of Experimental Social Psychology*, 43, 618-625.
- Chambers, J. R., & Windschitl, P. D. (2004). Biases in social comparative judgments: The role of nonmotivated factors in above-average and comparative-optimism effects. *Psychological Bulletin*, 130, 813-838.
- Chambers, J. R., Windschitl, P. D., & Suls, J. (2003). Egocentrism, event frequency, and comparative optimism: When what happen frequently is “more likely to happen to me”. *Personality and Social Psychology Bulletin*, 29, 1343-1356.

- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design & analysis issues for field settings*. Boston: Houghton Mifflin.
- Cortina, J. M., & Folger, R. G. (1998). When is it acceptable to accept a null hypothesis: No way, Jose? *Organizational Research Methods, 1*, 334-350.
- Crocker, J., & McGraw, K. M. (1984). What's Good for the Goose Is Not Good for the Gander Solo Status as an Obstacle to Occupational Achievement for Males and Females. *American Behavioral Scientist, 27*, 357-369.
- Dunning, D., Meyerowitz, J. A., & Holzberg, A. D. (1989). Ambiguity and self-evaluation: The role of idiosyncratic trait definitions in self-serving assessments of ability. *Journal of personality and social psychology, 57*, 1082-1090.
- Epley, N., & Dunning, D. (2000). Feeling "holier than thou": Are self serving assessments produced by errors in self or social prediction? *Journal of Personality and Social Psychology, 79*, 861-875.
- Fiske, S.T. & Taylor, S.E. (1991). *Social cognition* (2nd edition). New York: McGraw-Hill.
- Frick, R. W. (1995). Accepting the null hypothesis. *Memory & Cognition, 23*, 132-138.
- Giladi, E. E., & Klar, Y. (2002). When standards are wide of the mark: Nonselective superiority and inferiority biases in comparative judgments of objects and concepts. *Journal of Experimental Psychology, 131*, 538-551.
- Greenwald, A. G. (1975). Consequences of prejudice against the null hypothesis. *Psychological Bulletin, 82*, 1-20.
- Greenwald, A. G. (1976). Within-subjects designs: To use or not to use?. *Psychological Bulletin, 83*, 314-320.

- Helzer, E. G., & Dunning, D. (2012). Why and when peer prediction is superior to self-prediction: The weight given to future aspiration versus past achievement. *Journal of personality and social psychology*, 103, 38-53.
- Hogarth, R. M. (1981). Beyond discrete biases: Functional and dysfunctional aspects of judgmental heuristics. *Psychological Bulletin*, 90, 197-217.
- Idson, L. C., Krantz, D. H., Osherson, D., & Bonini, N. (2001). The relation between probability and evidence judgment: An extension of support theory. *Journal of Risk and Uncertainty*, 22, 227-249.
- Jones, E.E. & Nisbett, R.E. (1972). The actor and the observer: Divergent perceptions of the causes of behavior. In: Jones, E. E., Kanouse, D.E., Kelly, H.H., Nisbett, R.E., Valins, S. & Weiner, B. (Eds.). *Attribution: Perceiving the causes of behavior*, Morristown: General Learning Press.
- Klar, Y. (2002). Way beyond compare: Nonselective superiority and inferiority biases in judging randomly assigned group members relative to their peers. *Journal of Experimental Social Psychology*, 38, 331-351.
- Klar, Y., & Giladi, E. E. (1997). No one in my group can be below the group's average: A robust positivity bias in favor of anonymous peers. *Journal of Personality and Social Psychology*, 73, 885-901.
- Klar, Y., & Giladi, E. E. (1999). Are most people happier than their peers, or are they just happy? *Personality and Social Psychology Bulletin*, 25, 585-594.
- Klar, Y., Medding, A., & Sarel, D. (1996). Nonunique vulnerability: Singular versus distributional probabilities and unrealistic optimism in comparative risk judgments. *Organizational Behavior and Human Decision Processes*, 67, 229-245.

- Krizan, Z., & Suls, J. (2008). Losing sight of oneself in the above-average effect: When egocentrism, focalism, and group diffuseness collide. *Journal of Experimental Social Psychology*, 44, 929-942.
- Kruger, J. (1999). Lake Wobegon be gone! The “below-average effect” and the egocentric nature of comparative ability judgments. *Journal of Personality and Social Psychology*, 77, 221-232.
- Kruger, J., & Burrus, J. (2004). Egocentrism and focalism in unrealistic optimism (and pessimism). *Journal of Experimental Social Psychology*, 40, 332-340.
- Kruger, J., Windschitl, P. D., Burrus, J., Fessel, F., & Chambers, J. R. (2008). The rational side of egocentrism in social comparisons. *Journal of Experimental Social Psychology*, 44, 220-232.
- Manning, D., Ethell, S., & Donovan, T. (2004, May). Categories of observer error from eye tracking and AFROC data. *In Medical Imaging 2004* (pp. 90-99). International Society for Optics and Photonics
- McArthur, L. Z., & Ginsberg, E. (1981). Causal Attribution to Salient Stimuli An Investigation of Visual Fixation Mediators. *Personality and Social Psychology Bulletin*, 7, 547-553.
- McElroy, T., & Dowd, K. (2007). Susceptibility to anchoring effects: How openness-to-experience influences responses to anchoring cues. *Judgment and Decision Making*, 2, 48-53.
- Moore, D. A., & Cain, D. M. (2007). Overconfidence and underconfidence: When and why people underestimate (and overestimate) the competition. *Organizational Behavior and Human Decision Processes*, 103, 197-213.

- Moore, D. A., & Kim, T. G. (2003). Myopic social prediction and the solo comparison effect. *Journal of Personality and Social Psychology*, 85, 1121-1135.
- Moore, D.A., & Small, D. (2007). Error and bias in comparative judgment: On being both better and worse than we think we are. *Journal of Personality and Social Psychology*, 92, 972-989.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review*, 110, 472-489.
- Myers, D. G. (1988). *Social psychology*. New York: McGraw-Hill.
- Niewiarowski, J., Karyłowski, J. J., Szutkiewicz-Szekalska, K., & Cypriańska, M. (2014). Reversed better-than-average effect in direct comparisons of nonsocial stimuli depends on the set size. *Memory & cognition*, 42, 639-647.
- Posavac, S. S., Kardes, F. R., Sanbonmatsu, D. M., & Fitzsimons, G. J. (2005). Blissful insularity: When brands are judged in isolation from competitors. *Marketing Letters*, 16, 87-97.
- Price, P. C. (2001). A group size effect on personal risk judgments: Implications for unrealistic optimism. *Memory and Cognition*, 29, 578-586.
- Pronin, E. (2008). How we see ourselves and how we see others. *Science*, 320, 1177-1180.
- Pronin, E., Gilovich, T., & Ross, L. (2004). Objectivity in the eye of the beholder: Divergent perceptions of bias in self versus others. *Psychological Review*, 111, 781-799.
- Pronin, E., & Kugler, M. B. (2007). Valuing thoughts, ignoring behavior: The introspective illusion as a source of the bias blind spot. *Journal of Experimental Social Psychology*, 43, 565-578.

- Pronin, E., Lin, D. Y., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28, 369-381.
- Radzevick, J. R., & Moore, D. A. (2008). Myopic biases in competitions. *Organizational Behavior and Human Decision Processes*, 107, 206-218.
- Samuelson, P. A. (1953). Consumption theorems in terms of overcompensation rather than indifference comparisons. *Economics*, 20, 1-9.
- Sears, D. O. (1983). The person-positivity bias. *Journal of Personality and Social Psychology*, 44, 233-250.
- Shepperd, J. A., Klein, W. M., Waters, E. A., & Weinstein, N. D. (2013). Taking Stock of Unrealistic Optimism. *Perspectives on Psychological Science*, 8, 395-411.
- Suls, J., Chambers, J., Krizan, Z., Mortensen, C.R., Koestner, B., & Bruchmann, K. (2010). Testing four explanations for the better/worse-than-average effect: Single- and multi-item entities as comparison targets and referents. *Organizational Behavior and Human Decision Processes*, 113, 62-72.
- Suls, J., Lemos, K., & Stewart, H. L. (2002). Self-esteem, construal, and comparisons with the self, friends, and peers. *Journal of personality and social psychology*, 82, 252-261.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Theeuwes, J. (1992). Perceptual selectivity for color and form. *Perception & Psychophysics*, 51, 599-606.

- Vallone, R. P., Ross, L., & Lepper, M. R. (1985). The hostile media phenomenon: biased perception and perceptions of media bias in coverage of the Beirut massacre. *Journal of personality and social psychology*, 49, 577-585.
- Von Neumann, J., & Morgenstern, O. (1947). *Theory of Games and Economics Behavior*. Princeton University Press, 2nd ed.
- Weinstein, N. D. (1982). Unrealistic optimism about susceptibility to health problems. *Journal of behavioral medicine*, 5, 441-460.
- Weinstein, N. D., & Klein, W. M. (1995). Resistance of personal risk perceptions to debiasing interventions. *Health Psychology*, 14, 132-140.
- Windschitl, P. D., Conybeare, D., & Krizan, Z. (2008). Direct-comparison judgments: When and why above- and below- average effects reverse. *Journal of Experimental Psychology*, 137, 182-200.
- Windschitl, P. D., Kruger, J., & Simms, E. N. (2003). The influence of egocentrism and focalism on people's optimism in competitions: When what affects us equally affects me more. *Journal of Personality and Social Psychology*, 85, 389-408.
- Windschitl, P. D., Rose, J. P., Stalkfleet, M. T., & Smith, A. R. (2008). Are people excessive or judicious in their egocentrism? A modeling approach to understanding bias and accuracy in people's optimism. *Journal of personality and social psychology*, 95, 253-273.
- Yantis, S. (1996). Attentional capture in vision. In A. F. Kramer, M. G. H. Coles., & G. D. Logan (Eds.), *Converging operations in the study of visual selective attention*. Washington, DC: American Psychological Association.

תקציר

מחקרים רבים בתחום השיפוטים ההשוואתיים מצביעים על קיומה של הטיה קשיחה, לפיה רוב החברים בקבוצות חיוביות נשפטים כטובים יותר מרוב החברים האחרים באותה הקבוצה.

הוצעו מספר הסברים לתופעה זו: ראשית, Chambers (2010) הציע את תיאוריית ה-unique attribute, שמציעה כי בקבוצות חיוביות, כל חבר קבוצה נתפס כטוב מיתר חברי הקבוצה על גבי התכונה החיובית לגביה הוא שונה מיתר חברי הקבוצה. שנית, תיאוריות ה-Focalism (לדוגמא: Chambers, Windschitl, & Suls, 2003; Klar, Medding, & Sarel, 1996; Moore & Kim, 2003) הסבירו שכאשר חבר קבוצה נשפט למול ממוצע הקבוצה או למול מספר חברי קבוצה, מרבית הקשב מופנה אל חבר הקבוצה הבודד, ולכן הוא נתפס כגבוה יותר מממוצע הקבוצה. ההסבר השלישי הוא הסברם של Giladi and Klar (2002). הם הסבירו את התופעה באמצעות מודל ה-LOGE. לפי המודל, ההטיה קורית שכן בתהליך ההשוואה נעשה שימוש בשתי השוואות שונות: ראשית, השוואה רלוונטית בין חברי הקבוצה השונים. שנית, השוואה לא רלוונטית לסטנדרט חיצוני לקבוצה המשווית, "סטנדרט כללי". הסטנדרט הכללי מורכב מהידע ומהייצוגיים הכלליים שיש לגבי התכונה הנשפטת, וביחס אליו נקבע עד כמה קבוצת ההשוואה חיובית או שלילית. לפי מודל ה-LOGE, ההטיה נובעת מההשוואה השנייה, לסטנדרט הכללי. לכן, אם הקבוצה חיובית, מרבית חברי הקבוצה יישפטו כחיוביים יותר ממרבית חברי הקבוצה האחרים, שכן הם חיוביים ביחס לסטנדרט הכללי.

בעבודה זו, מוצע פיתוח של מודל ה-LOGE: מודל ה-LOGE המשוקלל. על פי מודל זה, המשקל שניתן לשתי ההשוואות במהלך תהליך ההשוואה אינו תמיד זהה, וזאת בשונה ממה שהוצע במודל ה-LOGE הבסיסי. מודל ה-LOGE המשוקלל מציע כי ככל שנותנים משקל גדול יותר לפער שבין הקבוצה לסטנדרט הכללי, כך מבליטים את הפער בין חבר הקבוצה הנשפט לסטנדרט הכללי ומגדילים את ההטיה. לעומת זאת, ככל שנותנים משקל גדול יותר להבדלים שבין חברי קבוצת ההשוואה, כך מצטמצמת תשומת הלב להבדל בין הקבוצה לסטנדרט הכללי, וההטיה קטנה. מטרת הוספת המשקלות למודל הייתה לאפשר בחינה ניסויית של המודל כולו,

וספציפית, של השימוש בסטנדרט הכללי. לשם כך, נבחן מודל ה-LOGE המשוקלל מול שתי התיאוריות הנוספות בתחום, unique attribute ו-focalism.

בחלק הראשון של העבודה, נבחן השפעת של דמיון או שוני תוך קבוצתיים על גודל ההטייה. מודל ה-LOGE המשוקלל משער כי דמיון גבוה יותר בין הפריטים מקטין את ההבדלים הפנימיים בתוך הקבוצה, ולכן, משקל רב יותר ניתן להשוואה בין חברי הקבוצה לבין הסטנדרט הכללי, וההטייה תגדל. רעיון זה עומד בסתירה להשערתו של (Chambers 2010), לפיה הבדלים רבים יותר בין חברי הקבוצה מאפשרים לכל אחד מחברי הקבוצה להיות טוב יותר במאפיין שמבחין אותו מאחרים, ולכן מגדילים את ההטייה.

שלושת המחקרים בפרק זה תמכו במודל ה-LOGE המשוקלל: מחקר 1 הראה שקיים קשר חיובי בין מידת הדמיון הנתפסת של חברי הקבוצה לבין גודל ההטייה, מחקר 2 הראה שקבוצות הומוגניות מייצרות הטייה גבוהה יותר מאשר קבוצות הטרוגניות, ומחקר 3 השתמש במערך בתוך-נבדק ומצא שאפילו אותם הנבדקים מייצרים הטייה גבוהה יותר כשהם חושבים על הדמיון בין חברי הקבוצה, לעומת כשהם חושבים על השוני ביניהם.

בחלק השני של העבודה, נבחן "אפקט הסדר", שמציע שכל חברי הקבוצה יכולים להיתפס כגבוהים מממוצע הקבוצה, גם אם הם נשפטים בזה אחר זה. שלושת הניסויים הראשונים בחלק זה בחנו האם מתקיים אפקט סדר ותחת איזה תנאים. בניסוי 4 נמצא כי ההטייה מתקיימת עבור כל ארבעת חברי הקבוצה שנשפטו בניסוי, בניסוי 5 אפקט הסדר המשיך להתקיים גם כאשר נבדקים התבקשו לשפוט את הקבוצה שיצרו ברצף, פעם אחר פעם. בניסוי 6, הנבדקים התבקשו לייצר ולשפוט שתי קבוצות שונות, בזו אחר זו. גם בניסוי זה, נמצא אפקט סדר וההטייה לא ירדה כפונקציה של מספר השיפוט.

שלושת הניסויים הנוספים בחלק זה בוחנים את ההשערות המנוגדות של Focalism ושל מודל ה-LOGE המשוקלל לגבי אפקט הסדר. פוקליזם מציע ששיפוט של מספר חברי קבוצה בזה אחר זה חייב להוריד את ההטייה, שכן הוא מונע מצב בו תשומת הלב ממוקדת בחבר קבוצה אחד בלבד. לעומתו, מודל ה-LOGE המשוקלל מציע שההטייה יכולה לא לרדת, שכן היא תוצר של השוואה לסטנדרט כללי, שלא מושפע ממספר השיפטים שנעשה, או אפילו לעלות. המודל מציע שההטייה יכולה לעלות כאשר כל חברי הקבוצה דומים זה לזה. במצב כזה, המשקל שניתן

לסטנדרט הכללי יכול לגדול כאשר שופטים את כל חברי הקבוצה, זה אחרי זה, ולכן ההטייה יכולה לעלות.

תשעת הניסויים המופיעים בעבודה זו תמכו במודל ה-LOGE המשוקלל, וברעיון שבמהלך תהליך ההשוואה מתקיימת גם השוואה לסטנדרט חיצוני לקבוצה המשווית. כפי שניבא המודל, למשקל שניתן להשוואה זו השפעה מכרעת על גודל ההטייה.

אוניברסיטת תל-אביב

הפקולטה למדעי החברה ע"ש גרשון גורדון

בית הספר למדעי הפסיכולוגיה

מתי כל חבר קבוצה יכול להיות טוב יותר מממוצע

הקבוצה?

מודל ה- LOGE המשוקלל להטיות בהשוואות חברתיות

שיר אתגר

העבודה מוגשת לסנאט של אוניברסיטת תל-אביב

כחלק ממילוי הדרישות לקבלת תואר שלישי

מרץ, 2015