

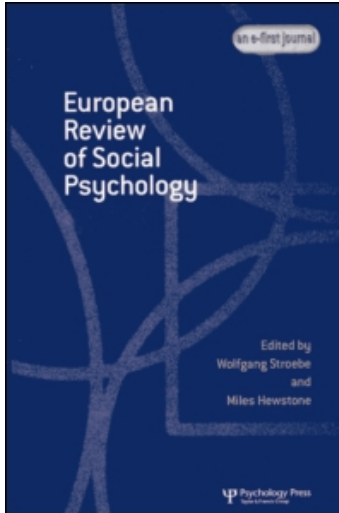
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Chapter 4

Asymmetries in Judgements of Ingroup and Outgroup Variability

Thierry Devos, Loraine Comby and Jean-Claude Deschamps
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ABSTRACT

It is common to observe an asymmetry in judgements of intragroup variability: sometimes the outgroup is perceived as being more homogeneous than the ingroup, while the opposite is true at other times. A review of the literature on this theme is presented, including information on the techniques used to measure perceived variability within groups. The empirical research is briefly discussed. The explanatory principles posited in this particular field of research are described. Among these principles, a distinction is made between cognitive and motivational approaches. Several approaches which integrate both cognitive and motivational factors are also examined. Finally, the need to take account of different levels of analysis is emphasized.

INTRODUCTION

Most Americans are superficial and often behave like children.

It is true that, broadly speaking, the Swiss are hardworking and rather uncommunicative.

A piece of advice: never do business with Italians. They are all the same: they just cannot be trusted!

You talk about the British as though they were all alike, but the question is not that simple! Welsh people have little in common with Londoners and even less with Scots.

Among the students with whom I am acquainted, there is every imaginable style.

We form a wonderful group of friends, even though our personalities are very different.

Words of this kind, which reflect our perception, knowledge and judgements of the groups constituting our social environment, are frequent in our everyday lives. They do more than simply associate characteristics, features or behaviours with groups of people: they actually contain information on the internal variability of the groups under consideration. When we state that most members of a group possess a given characteristic, it means that we judge them to be relatively similar in that regard. When we make distinctions between the members of a group, it means that we perceive that group as a heterogeneous entity.

The past 15 years have seen the publication of several studies focusing on judgements of intragroup variability.¹ Most argue that ingroups and outgroups are often perceived differently in regard to the variability of their members. The expression "outgroup homogeneity effect" has been coined to describe the tendency of subjects to perceive an outgroup as having greater homogeneity than an ingroup (Jones, Wood, & Quattrone, 1981).² The opposite tendency is known as an "ingroup homogeneity effect" (Simon & Brown, 1987), i.e. when the perceived homogeneity is greater within an ingroup than an outgroup. In this paper, we propose to review the major studies which have concentrated on such asymmetries.

Before we proceed any further, however, we should stress that the studies we are about to review are often said to draw some of their inspiration from the investigations into stereotypes (Katz & Braly, 1933) and social categorization (Tajfel, 1959). For a long time, stereotypes were defined as images or beliefs relating to characteristics shared by the members of a group (on this subject, see Stroebe & Insko, 1989). Today, stereotypes are viewed rather as group representations with varying degrees of homogenization (Linville, Salovey, & Fischer, 1986). Some researchers consider that this shift is due to a gradual loss of interest in the content of stereotypes to the benefit of the cognitive processes which such stereotypes call into play (Park, Judd, & Ryan, 1991). Categorization is one of those processes. We should recall here that

¹ The terminology in this field of research is diverse: one speaks of intragroup "variability", "homogeneity", "heterogeneity", "assimilation" and even "differentiation". In this paper, "homogeneity" and "heterogeneity" are used to compare groups with respect to their "variability", which we view as a more general term.

² Some authors use these terms to describe a group's tendency to be perceived as being more heterogeneous by people who belong to it than by people who don't (Park & Rothbart, 1982).

Tajfel's propositions (1972; 1981) describe the conditions in which categorization produces effects of contrast (or cognitive differentiation) between categories and assimilation (or cognitive stereotypicality) within such categories. However, research based on this approach has traditionally emphasized the examination of intercategory differentiation, particularly with respect to its ethnocentric nature (Brewer, 1979; Mullen, Brown, & Smith, 1992), rather than intracategory differentiation.

Despite the many features which studies on judgements of variability and investigations into stereotypes or social categorization have in common, it would be erroneous to suggest the existence of a direct link between them. Studies on judgements of variability evolved primarily on the basis of the intuition that a group to which one does not belong is perceived as being more homogeneous than a group to which one does. The first priority in this field consisted in bringing to the fore the outgroup homogeneity effect, which was made possible using various categorization criteria (Goethals, Allison, & Frost, 1979; Jones, Wood, & Quattrone, 1981; Park & Rothbart, 1982).

Since then, several attempts have been made at explaining the outgroup homogeneity effect. Familiarity has been the most frequently posited explanation (Taylor *et al.*, 1978; Taylor, 1981), no doubt because it seems so evident. If subjects perceive more heterogeneity in the ingroup than they do in the outgroup, it is because they interact more frequently and in a wider range of contexts with the members of the first group than they do with those of the second, because they are more familiar with the first group than with the second. What is emphasized in this type of explanation is the knowledge or information on which subjects can draw. On this basis, various models were developed in an effort to describe how subjects deal with information to which they are exposed and how they express judgements of variability (Linville, Salovey, & Fischer, 1986; Park & Hastie, 1987). This type of approach has become increasingly popular. Earlier models have been revised (Judd & Park, 1988; Linville, Fischer, & Salovey, 1989; Park & Judd, 1990) and new models developed (Kashima & Kashima, 1993; Kraus *et al.*, 1993). In some cases, these models deal with asymmetry in judgements of variability in an indirect manner, their primary objective remaining the understanding of how judgements of variability are expressed, generally speaking.

Motivational explanations began to emerge, alongside cognitive explanations. But they never enjoyed the same level of attention as their cognitive counterparts, possibly because of social psychology's keen interest in the study of cognitive processes. Among the motivations frequently posited to explain asymmetries in judgements of variability, one finds the need to validate personal opinions (Goethals, Allison, & Frost, 1979), the need to ensure predictability of the outgroup (Stephan, 1977), the need to justify discriminatory behaviours and to protect oneself against them (Wilder, 1986), the needs to assimilate and to differentiate between the self and others (Brewer, 1993),

and finally the need to acquire and to preserve a positive social identity (Simon & Brown, 1987). This last motivation has received the most attention (Simon, 1992b).

Early intuitions gradually developed into reasoned developments based on sound theoretical backing. At the same time, researchers fine-tuned their procedures. Various techniques to measure perceived variability were elaborated (on this subject, see Linville, Salovey, & Fischer, 1986; Park & Judd, 1990; Quattrone, 1986). Furthermore, the study of natural groups was sometimes discarded to the benefit of research on experimentally-created groups (Judd & Park, 1988; Mackie, Sherman, & Worth, 1993; Simon & Brown, 1987; Simon & Pettigrew, 1990; Wilder, 1984). As a result, a number of problems associated with natural groups were circumvented, given that it was possible to minimize, or at least better control, the role played by subjects' knowledge of the ingroup and outgroup.

Several authors have carried out a review of the literature on asymmetries in judgements of intragroup variability (Linville, Salovey, & Fischer, 1986; Messick & Mackie, 1989; Mullen & Hu, 1989; Ostrom & Sedikides, 1992; Park, Judd, & Ryan, 1991; Quattrone, 1986; Simon, 1990; 1992b). Since the publication of these papers, discussions centred on this particular topic have been enriched by a considerable amount of new material. In our view, it is a worthwhile exercise to take stock of the situation as it stands today. This paper should be viewed as supplementing its predecessors. We should also underscore the choice we have made to treat the outgroup and ingroup homogeneity effects on an equal footing, in contrast to many past papers which have focused primarily on the outgroup homogeneity effect. More than merely summarizing the empirical results published to date, this paper gives an account of the explanatory principles which can help describe asymmetries in judgements of variability. Without privileging one particular approach, we will strive to describe the explanatory principles in some detail, giving their theoretical foundations prior to quoting examples from current research.

The first parts of this paper will be largely devoted to empirical questions. Today, a wide array of techniques help us to understand judgements of variability better; these will be presented in our review. Over 40 studies have been published to date on judgements of variability. This paper will offer a succinct description of these studies. Subsequently, we will examine the explanatory principles posited to describe the outgroup and ingroup homogeneity effects, looking first at principles stemming from a cognitive approach, prior to focusing on those which call into play mainly motivational factors. In this particular field of research, some authors recently underscored the need to take account of both cognitive and motivational factors (Ostrom & Sedikides, 1992; Sedikides & Ostrom, 1993). So far, a handful of attempts have been made in this direction (Haslam *et al.*, 1995; in press; Marques, 1993; Marques, Robalo, & Rocha, 1992; Simon, 1993); they will also be presented. Finally, we will explain

why it is important, in our opinion, to take account of factors which do not pertain exclusively to an intra-individual level of analysis (Doise, 1986) when studying judgements of variability.

MEASURING PERCEIVED VARIABILITY

Techniques used to measure perceived variability within a group have been classified in various ways (Linville, Salovey, & Fischer, 1986; Park & Judd, 1990; Quattrone, 1986). Park and Judd (1990, Experiment 1) compare judgements of variability obtained with different techniques. They show that these judgements have two main facets: the first relates to the dispersion of a group's members on a given dimension, while the second has to do with the degree of applicability to a group of the stereotype with which it is associated. These two aspects seem to be independent or non-correlated. The concept of intragroup variability is more or less directly linked to the statistical meaning of the word "dispersion". Thus, it is not difficult to see that the range and standard deviation of the distribution of a group's members represent adequate indicators of their variability. The same cannot be said of measures of stereotypicality, which refer to a group's central tendency rather than to its internal variability. One may nonetheless consider that, the more a group is stereotyped, the greater is its homogeneity.

Measures of Dispersion (DIS)

Among measures of dispersion, two techniques are more frequently used:

- *The range of a distribution*: subjects are asked to indicate, on a bipolar scale, the two endpoints between which 50% of the members of a group are situated (Jones, Wood, & Quattrone, 1981). The greater the distance between these two endpoints, the higher the group's perceived variability. Sometimes, subjects are asked to perform the same exercise for 100% of the members of a group and also to indicate where they are situated on average (Park & Judd, 1990).
- *The formation of a distribution*: subjects are asked to indicate, on a bipolar scale, how one hundred members of a group are distributed (Linville, Salovey, & Fischer, 1986). This type of scale may include the six following alternatives: "very introvert", "quite introvert", "slightly introvert", "slightly extrovert", "quite extrovert", "very extrovert". A more simple version of this technique consists in asking subjects to allocate to each alternative small stickers representing given numbers of members (Park & Judd, 1990). Several indexes may be calculated with this technique (Linville, Fischer, & Salovey, 1989). The variance and standard deviation of the

distribution produced by subjects represent dispersion indexes. The probability that given members of a group appear in different alternatives on the scale may be taken to represent an index of perceived variability. The mean provides an index of the group's central tendency.

Measures of Stereotypicality (STE)

The two techniques we have just discussed provide indexes of central tendency. On the condition that the dimensions of judgement be selected for that purpose (Park & Judd, 1990), such techniques can provide a measure of stereotypicality: the more subjects attribute to a group its stereotypic characteristics and the less they attribute counter-stereotypic characteristics, the lower the perceived variability.

A relatively common technique provides a measure of stereotypicality in a more direct manner. It consists in asking subjects to evaluate, with respect to a group's stereotypic and counter-stereotypic characteristics, the proportion of members to which such characteristics apply (Park & Rothbart, 1982). This evaluation is usually expressed in percentage points. Here, one may consider that the more the percentage of stereotypic characteristics is high and the percentage of counter-stereotypic characteristics low, the lower the perceived variability.

Global Measures (GLO)

Another technique, whose merit lies in its simplicity, consists in asking subjects to globally evaluate a group's variability (Quattrone & Jones, 1980) using a scale which may range from "almost all are alike" to "all are completely different". This type of measure appears to be linked, albeit in a tenuous manner, to measures of dispersion and stereotypicality (Park & Judd, 1990).

Other Measures (OTH)

A number of other techniques may also provide measures of perceived variability (Lee & Ottati, 1993; Stephan, 1977; Wilder, 1984). The global judgement technique can, for instance, be adapted in order to obtain measures of variability on particular dimensions (Clémence, 1993). We should point out that several studies involving the memorization and retrieval of information sometimes bring to the fore asymmetries similar to those posited here (see, for instance, Anthony, Copper, & Mullen, 1992; Bothwell, Brigham, & Malpass, 1989; Brewer, Weber, & Carini, 1995; Frable & Bem, 1985; Lorenzi-Cioldi, 1993; Lorenzi-Cioldi, Eagly, & Stewart, 1995; Ostrom *et al.*, 1993).

However, the problems underlying this research are somewhat different from those we are dealing with here: they pertain more to person memory than to judgements of intragroup variability. It is for this reason that we decided to bypass the above studies in this paper.

The techniques we have just examined provide measures of perceived variability which are not interchangeable (Park & Judd, 1990). It would seem advisable, therefore, at the level of empirical research, not to limit one's investigations to a single type of measure (Ostrom & Sedikides, 1992). The impact of a given factor may vary according to the type of measure used (Sedikides & Ostrom, 1993). Comparing judgements produced with different techniques not only leads to a better understanding of the processes involved but also ensures that conclusions regarding the possible role of a factor are not drawn too hastily. Furthermore, the idea of supplementing judgements of variability with measures capable of shedding light on them is without doubt of interest. Some measures enable us to grasp the complexity of representations which subjects have of a group, as well as the manner in which such representations are organized (Linville & Jones, 1980; Ostrom *et al.*, 1993; Park, Ryan, & Judd, 1992). Other measures allow us to come to terms with the motivations which underlie judgements of variability (Simon & Brown, 1987; Simon & Pettigrew, 1990).

OVERVIEW OF EMPIRICAL RESEARCH

The presentation we have chosen for our overview of empirical research is highly synthetic. Table 4.1 contains a list of published studies highlighting asymmetries in judgements of variability. Research which concludes that there is equal perceived variability in the ingroup and outgroup has been omitted from this overview. The literature contains a wide range of criteria which are often used to decide whether or not a particular study should be included in a review of this kind (Ostrom & Sedikides, 1992). Simon (1992b) suggests that a comparison between the ingroup and outgroup should be a within-subject variable, in order to ensure the comparative nature of the task. For their part, Park and Rothbart (1982) argue that investigations into natural groups should involve subjects from each separate group, in order to ensure that variability differences which may be observed do not result from objective differences between the groups. Several studies do not satisfy the above criteria and, as such, could be ignored. Nonetheless, their results are helpful in understanding how such phenomena are dealt with. The idea of studying perceptual variability in tasks which have a low level of comparativeness is certainly of interest. A number of studies look specifically at the effects of the more or less comparative nature of the task (Haslam *et al.*, 1995). Even in instances where research focuses on the subjects of a single group, effects

Table 4.1 Synthetical presentation of empirical research conducted on the asymmetries in judgements of intragroup variability

| Reference | Target groups | Subjects | Additional independent variables | Measures | Main results |
|---|---|--|--|------------|--|
| Bartsch & Judd (1993) | Fraternities Sororities | 64 Male students 60 Female students | 1. Ingroup vs. outgroup in first group described 2. First group described of large vs. small size | DIS STE | OGHE if ingroup first group described NO if outgroup first group described ingroup more homogeneous if described after a large outgroup than if described after a small outgroup (DIS) |
| Brown & Smith (1989) | Male academics Female academics | 23 Male academics 14 Female academics | — | DIS | OGHE if men IGHE if women |
| Brown & Wootton-Millward (1993) | Own group New student nurses All student nurses Registered general nurses Auxiliaries Doctors | 77 Student nurses | Dimensions | DIS | IGHE & OGHE for some comparisons and on some dimensions |
| Clémence (1993) | Students at a higher school of commerce Commercial apprentices | 78 Students at a higher school of commerce | 1. Dimensions 2. Sex of subjects | OTH | OGHE on some dimensions and mainly if female subjects |
| Codol (1984a, Exp. 1) | Professional ingroup—self-included (A) Professional ingroup—self-excluded (B) Professional outgroup (C) | 53 Firemen 43 Funeral employees | — | GLO | A less homogeneous than B A less homogeneous than C B less homogeneous than C |
| Goethals, Allison, & Frost (1979, Exp. 1) | Opinion similar to self Opinion not similar to self (feminism) | 37 Students | — | GLO | OGHE |

| | | | | | |
|---|---|---|---|-----|---|
| Goethals, Allison, & Frost (1979, Exp. 2) | Opinion similar to self Opinion not similar to self (performance of President) | 151 students | — | GLO | OGHE |
| Goethals, Allison, & Frost (1979, Exp. 3) | Opinion similar to self Opinion not similar to self (trade with South Africa) | 29 Students | — | GLO | OGHE |
| Haslam, Oakes, Turner, & McGarty (1995, Exp. 1) | Australians Americans* | 65 Australian students | Anticipation vs. no anticipation of an intergroup comparison | STE | OGHE if no anticipation NO if anticipation |
| Haslam, Oakes, Turner, & McGarty (1995, Exp. 2) | Australians Americans* | 297 Australian students | Anticipation vs. no anticipation of an intergroup comparison | STE | OGHE if no anticipation NO if anticipation |
| Hewstone, Islam, & Judd (1993, Exp. 1) | Hindus in Bangladesh (A) Muslims in Bangladesh (B) Hindus in India (C) Muslims in India (D)* | 65 Hindu students from Bangladesh 63 Muslim students from Bangladesh | — | GLO | C less homogeneous than D if Hindu students B less homogeneous than A if Muslim students |
| Hewstone, Islam, & Judd (1993, Exp. 2) | Hindus in Bangladesh (A) Muslims in Bangladesh (B) Hindus in India (C) Muslims in India (D)* | 117 Hindu students from Bangladesh 120 Muslim students from Bangladesh | — | GLO | C less homogeneous than D if Hindu students B less homogeneous than A if Muslim students |
| Jones, Wood, & Quattrone (1981) | 4 Eating clubs | 15 Members of each club | — | DIS | OGHE |
| Judd & Park (1988) | Experimental groups of 4 subjects (perceptual task) | 192 Students | Anticipation of a cooperative vs. competitive interaction with the outgroup | DIS | OGHE if competition NO if cooperation |

(continued over)

Table 4.1 (continued)

| Reference | Target groups | Subjects | Additional independent variables | Measures | Main results |
|---|---|---|----------------------------------|------------|---|
| Judd, Ryan, & Park (1991) | Business majors Engineering majors | 58 Business majors 58 Engineering majors | — | DIS STE | OGHE |
| Kelly (1988) | Labour Party Conservative Party Social Democratic Party Liberal Party Communist Party National Front | 68 Labour Party supporters 44 Conservative Party supporters 41 Social Democratic Party supporters 36 Liberal Party supporters 10 Communist Party supporters | — | GLO | OGHE |
| Kelly (1989) | Labour Party Conservative Party | 64 Labour Party supporters | Dimensions | DIS | IGHE on some dimensions OGHE on some dimensions NO on some dimensions |
| Lee (1993) | Black people Chinese people | 41 African Americans 34 Chinese Americans | — | OTH | IGHE |
| Lee & Ottati (1993) | American people Chinese people | 182 American students 182 Chinese students | — | OTH | OGHE if American students IGHE if Chinese students |
| Linville, Fischer, & Salovey (1989, Exp. 1) | College students Elderly persons | 30 Students 30 Elderly persons | — | DIS | OGHE |
| Linville, Fischer, & Salovey (1989, Exp. 2) | Irish college students American college students | 68 Irish students 30 American students | — | DIS | OGHE |
| Mackie, Sherman, & Worth (1993, Exp. 1) | Women Men* | 74 Female students 67 Male students | — | GLO | OGHE |
| Mackie, Sherman, & Worth (1993, Exp. 2) | Experimental groups (perceptual task) | 140 students | — | GLO | OGHE |

| Manstead (1982) | Opinion similar to self Opinion not similar to self | 59 Students | 4 Different topics | GLO | OGHE on the topic of feminism NO on the other topics |
|---|--|---|---|-------------------|---|
| Marques, Robalo, & Rocha (1992, Exp. 1) | Inhabitants of Porto (Catholics) Protestants Astronauts | 18 Students of Porto | — | DIS | OGHE |
| Marques, Robalo, & Rocha (1992, Exp. 2) | Own school Disliked school* | 50 Schoolchildren | — | DIS | OGHE |
| Ng & Lindsay (1994, Exp. 1) | White people Oriental people | 60 White students 60 Oriental students | — | GLO | OGHE |
| Park & Judd (1990, Exp. 1) | Men Women* | 67 Male students 62 Female students | — | DIS STE GLO | OGHE (DIS & STE) NO (GLO) |
| Park & Judd (1990, Exp. 2) | Business majors Engineering majors | 12 Business majors 12 Engineering majors | — | DIS STE | OGHE |
| Park & Rothbart (1982, Exp. 1) | Women Men | 74 Female students 74 Male students | — | STE | OGHE |
| Park & Rothbart (1982, Exp. 2) | Women Men* | 97 Female students 94 Male students | — | STE | OGHE |
| Park & Rothbart (1982, Exp. 3) | 3 Sororities (A, B & C) | 33 Members of A 29 Members of B 28 Members of C | — | GLO | OGHE |
| Park, Ryan, & Judd (1992, Exp. 1) | Business majors Engineering majors | 30 Business majors 30 Engineering majors | — | DIS STE | OGHE |
| Simon (1992a) | Experimental groups (aesthetic preferences) | 36 Students | Dimensions | DIS | IGHE on ingroup dimensions NO on outgroup dimensions |
| Simon & Brown (1987) | Experimental groups (perceptual task) | 192 Schoolchildren | 1. Minority vs. non- minority ingroup 2. Dimensions | DIS | IGHE if minority ingroup OGHE if non-minority ingroup (on some dimensions) |

(continued over)

Table 4.1 (continued)

| Reference | Target groups | Subjects | Additional independent variables | Measures | Main results |
|--|---|-------------------------------|--|------------|--|
| Simon, Glässer-Bayerl, & Stratenwerth (1991) | Straight men Gay men | 62 Straight men 62 Gay men | Dimensions | DIS GLO | OGHE (DIS) if straight men IGHE (DIS) if gay men (on some dimensions) OGHE (GLO) |
| Simon & Hamilton (1994, Exp. 1) | Experimental groups (aesthetic preferences) | 32 Students | 1. Majority vs. minority ingroup 2. Dimensions | DIS | OGHE if majority ingroup NO if minority ingroup (on some dimensions) |
| Simon & Hamilton (1994, Exp. 2) | Experimental groups (aesthetic preferences) | 72 Students | 1. Majority vs. minority ingroup 2. Ingroup of high vs. low status | DIS | IGHE if minority ingroup of high status OGHE if majority ingroup of high status NO in the other conditions |
| Simon & Mummendey (1990) | Experimental groups (interest in various fields) | 88 Students | No information on the size of the groups vs. information that both groups have the same size | GLO | OGHE if no information NO if information |
| Simon & Pettigrew (1990) | Experimental groups (aesthetic preferences) | 191 Students | 1. Ingroup well- vs. ill-defined 2. Ingroup minority, majority or no information 3. Dimensions | DIS GLO | IGHE (DIS) except if ingroup ill-defined and no information OGHE (DIS) if ingroup ill-defined and no information (on some dimensions) IGHE (GLO) if minority ingroup OGHE (GLO) if majority ingroup NO (GLO) if no information OGHE (GLO) if ill-defined ingroup NO (GLO) if well defined ingroup |

| Author (Year) | Participants | Number | Design | Measure |
|-----------------------|---|--------|--|---|
| Stephan (1977) | Anglo people | 297 | — | IGHE |
| | Chicano people | 241 | | |
| | Black people | 212 | | |
| Wilder (1984, Exp. 1) | Experimental groups (aesthetic preferences) | 160 | Dimensions | OGHE on some dimensions |
| | Experimental groups of 4 subjects | 96 | Groups created: Without previous interaction + immediate measures (A); After previous interactions + immediate measures (B); After previous interactions + measures after 1 competition (C); After previous interactions + measures after 2 competitions (D) | GLO IGHE for B and C OGHE for A and D |

Abbreviations: DIS: measures of dispersion; STE: measures of stereotypicality; GLO: global measures; OTH: other measures; IGHE: ingroup homogeneity effect; OGHE: outgroup homogeneity effect, NO: no asymmetry; *between-subjects variable.

linked to certain parameters, such as the salience of belonging to a group or the dimensions of judgement, suggest that the results which are obtained do more than merely illustrate the objective differences between groups (Kelly, 1989). In spite of their "limitations", we have included several such studies in Table 4.1.

We have provided the following data for each study:

- *Target groups* In some instances, judgements pertain to natural groups, such as ethnic, national or gender categories, university faculties or departments. In other instances, they pertain to experimental groups, i.e. groups which have been created by allegedly categorizing subjects on the basis of their responses to an initial task, although the categorization was in fact random. We have indicated instances where the comparison between ingroup and outgroup is a between-subjects rather than within-subject variable.
- *Subjects* The number of subjects from each group has been indicated in the case of natural groups, and the overall number of subjects in the case of experimental groups. We have systematically listed the number of subjects who took part in the study, even in instances where the analysis carried out by the authors actually involved a smaller number of subjects, because of missing responses for instance.
- *Additional independent variables* Generally speaking, the target group and the social belonging of subjects constitute the two main independent variables, although researchers sometimes introduce other parameters. We have indicated only those parameters directly influencing asymmetry in judgements of variability. No mention has been made of parameters mediating perceived variability in a global manner.
- *Measures* We have used the classification referred to earlier. As a result, we have differentiated between measures of dispersion (DIS), measures of stereotypicality (STE), global measures (GLO) and other measures (OTH). We have not indicated the differences between various techniques and indexes within a given class.
- *Main results* Unfortunately, it was not possible to describe the pattern of results in detail, for reasons of complexity. We limited ourselves to indicating whether an outgroup homogeneity effect (OGHE) or an ingroup homogeneity effect (IGHE) was highlighted, or whether the perceived variability was identical for the ingroup and outgroup (NO). Where possible, we specified the conditions in which the above effects were observed. When a result was obtained on a single measure only, its type is indicated next to the relevant result.

Table 4.1 shows the diversity of categorization criteria, the most frequently used types of measure and the factors which have a bearing on asymmetries in judgements of intragroup variability. An analysis of Table 4.1 reveals that a

number of authors frequently rely on one type of measure only when seeking to highlight perceived variability within groups. This fact is to be deplored, especially because studies relying on different measures usually indicate that results vary according to the type of measure used. Among the various parameters affecting judgements of variability, we should mention in particular the dimensions on which such judgements were produced, the numerical and social status of groups, the type of interaction between groups, and the more or less comparative nature of the task submitted to subjects. We can also observe that an outgroup homogeneity effect is more often brought to the fore than an ingroup homogeneity effect. In instances where the latter is highlighted, an outgroup homogeneity effect is often present as well. We should point out that the great majority of studies focus on natural groups, although some asymmetries are revealed in studies involving experimentally created groups.

Given the diverse nature of the research work contained in Table 4.1, we have found it difficult to go much beyond these few comments and draw general conclusions. As a result, our attention will focus primarily on the explanatory principles posited by the various authors.

COGNITIVE APPROACHES

A first group of explanatory principles come under the cognitive approach. How do subjects evaluate variability within a group? What information do they use to make such an evaluation? What are the processes which enable them to deal with such information? How do their judgements vary depending on whether they pertain to ingroups or to outgroups? These are the types of questions which these explanatory principles attempt to address. As we will see shortly, responses differ according to what model is chosen. We should also point out that, behind the oppositions and discrepancies we are about to encounter, one can find many of the discussions currently taking place in the field of social cognition (Schneider, 1991; Sherman, Judd, & Park, 1989).

To begin with, let us examine two important models: that of Linville, Fischer, & Salovey (1989; see also Linville & Fischer, 1993; Linville, Salovey, & Fischer, 1986) and that of Judd and Park (1988; see also Park & Judd, 1990; Park, Judd, & Ryan, 1991). Both draw their inspiration from previous models which were developed to describe the cognitive perception of object categories. It is customary to differentiate between two types of model in this field: some researchers argue that our knowledge of a given category is represented by exemplars of this category (Hintzman, 1986; Nosofsky, 1986), while others consider that such knowledge is represented by abstract properties, prototypes or lists of characteristics associated with such a category (Fried & Holyoak, 1984; Posner & Keel, 1968). Although the two above-mentioned

models borrow features from both types, the first is more in line with an approach emphasizing exemplars, while the second may be viewed as coming within the scope of an abstraction-based approach.

An Exemplar-based Model

The model developed by Linville, Fischer, & Salovey (1989) is based on the assertion that the knowledge of a group is represented by the descriptions of some of its exemplars (Smith & Medin, 1981). Exemplars can be either an individual belonging to a group, sub-groups, abstract types or stereotypic images. Subjects possess a list of exemplars for each group, which they store in their long-term memory; every exemplar is represented by a set of characteristics such as physical or personality traits, attitudes, behaviours or social belonging. As happens in other memory activities, processes of learning, forgetting and retrieval all come into play (Hintzman, 1986). The knowledge which subjects have of a group depends obviously on the exemplars they encounter. However, a selection process does take place: some items of information are retained, while others are forgotten.

When expressing a judgement of group variability on a given characteristic, subjects retrieve or activate exemplars stored in their long-term memory, before creating a distribution of these exemplars on the characteristic. Variability is thus assessed only at the time judgements are expressed and such an evaluation is made on the basis of exemplars stored in memory. Exemplars provide information on the variability of the group. Once expressed, judgements may be stored in memory. As a result, and contrary to what is sometimes claimed, a model of this type does offer a description of how abstractions are shaped and memorized. However, these abstractions have no specific role or status in later judgements: they constitute exemplars in the same way as others.

If we were to go no further, the model would not predict asymmetries in judgements. However, this is no longer the case when we introduce the idea that subjects are generally more familiar with the ingroup than the outgroup. Often, subjects are acquainted with more members of the ingroup than the outgroup: they have more frequent, more differentiated and wider-ranging experiences with the former than they do with the latter. As a result, the memory of subjects contains a higher number of exemplars of the ingroup than the outgroup. This explains why subjects tend to perceive the former as being more heterogeneous than the latter. From this point of view, the outgroup homogeneity effect is not due so much to a distinction between ingroup and outgroup as to a difference in familiarity between the two.

This explanatory principle is compatible with the results obtained by Linville, Fischer, & Salovey (1989). When judgements pertain to different age groups, such as young vs. old (Linville, Fischer, & Salovey, 1989,

Experiment 1), or to student groups of various ethnic origin (Linville, Fischer, & Salovey, 1989, Experiment 2), subjects perceive the ingroup as being more heterogeneous than the outgroup. In both cases, one may consider that they are more familiar with the ingroup than with the outgroup. If such a difference in familiarity did not exist, the two groups would doubtless be perceived as being equally homogeneous. Within a student population, one can assume that subjects are almost as familiar with the members of the gender group to which they belong as they are with those of the group to which they do not. A study undertaken by these authors indicates that, in this case, subjects perceive almost as much homogeneity among men as they do among women (Linville, Fischer, & Salovey, 1989, Experiment 3), whatever their own gender group.

Many results may be interpreted on the basis that subjects are more familiar with the ingroup than they are with the outgroup. Even in the case of experimentally created groups, there is always at least one member of the ingroup with whom subjects are very familiar, namely themselves (Linville, Fischer, & Salovey, 1989). But familiarity is an awkward variable to measure and to manipulate, and demonstrating its explanatory value is no easy task. This notwithstanding, it would seem that, the more familiar subjects are with a given group, the more they perceive this group as being variable (Linville & Fischer, 1993; Linville, Fischer, & Salovey, 1989, Experiment 4), at least in certain conditions. Data collected by Islam and Hewstone (1993) on the relations between Hindus and Muslims in Bangladesh confirm these findings. The authors observe that, the more subjects have contacts with the outgroup, the more they perceive the outgroup as being variable. In this case, the extent of contacts, which may be viewed as a measure of familiarity, mediates judgements of variability.

One should note that, subject to certain modifications, the model of Linville, Fischer, & Salovey (1989) can integrate additional principles to explain asymmetries in judgements of variability. Linville and Fischer (1993) show how a model of this kind can take account of the fact that subjects pay greater attention to individuated information in the case of the ingroup, or that the information which subjects have on the outgroup is often second-hand information, conveyed by stories or the media, generally in the shape of stereotypes.

An Abstraction-based Model

In the model we have just examined, the determining factor in judgements of variability is the quantity of information to which subjects are exposed rather than the processes used to deal with such information, which are identical for both the ingroup and outgroup. The same cannot be said for Judd and Park's model (1988). Here, the processes to deal with information are the

determining factor. Indeed, even when subjects possess identical information on the ingroup and outgroup, they do not perceive the two groups as being equally homogeneous. This suggestion had already been made by Park and Rothbart (1982) following their observation that the gender group to which subjects belong is perceived less stereotypically than the one to which they do not. At the time, the authors argued that the level at which information is encoded varies according to whether such information relates to an ingroup or an outgroup: categories used for the ingroup are more differentiated and subordinated (see also Mackie & Worth, 1989; Rehm, Lilli, & Strack, 1988).

In Judd and Park's model (1988), the distinction between various levels is a central consideration: subjects are likely to store information not only on the group considered as a whole, which includes information relating to its central tendency and variability (Fried & Holyoak, 1984), but also on individuals who make up this group. Storage of information on the outgroup and ingroup involves both levels. However, when subjects express judgements, they use the two levels differently. In the case of an outgroup, they simply recall information on the group as a whole. In the case of an ingroup, they recall not only information which they possess at that level but also information on the individual members of the group: their judgements are therefore based on the two levels. For the ingroup, the information on individuals is likely to balance the information on the group as a whole. How this actually occurs may vary, but generally speaking one can expect that information at the individual level increases the perceived variability inasmuch as it pertains to individuals and to oneself in particular. Subjects probably activate information at that level more easily, for the reason that the self is a particularly salient member of the ingroup.

It may be useful here to underscore the opposition existing between the two models we have just presented. For Judd and Park (1988), an abstraction process occurs precisely when subjects are exposed to items of information: they form an opinion on the variability of the group and ulterior judgements will be based, at least in part, on this abstraction. For Linville, Fischer, & Salovey (1989), however, it is only when a judgement is sought that the variability of the group is assessed, an evaluation which is made on the basis of exemplars stored in memory. This opposition signals a common distinction in the field of social cognition between on-line and memory-based judgements. Some authors have attempted to determine whether judgements of variability are made using on-line or memory-based processes. Empirical results in this field are somewhat contradictory. Several results back the second alternative in view of the relative slowness of judgements of variability, particularly as regards the outgroup (Mackie, Sherman, & Worth, 1993, Experiments 1 and 2). This runs counter to Judd and Park's model (1988). Other results support the first alternative, given that when subjects are confronted with behaviours attributed to the members of a group, variability assessment is not dependent

on the behaviours which subjects memorize the most easily (Park & Hastie, 1987, Experiments 1 and 2).

Let us return to the proposition that, in the case of the ingroup only, judgements of variability are mediated by information about the individuals who make up that group. Given that the self is an important element of the ingroup, one may expect it to play a pivotal part in these judgements. A study conducted by Codol (1984a, Experiment 1) provides an illustration of this proposition. Here, subjects are requested to think of the ingroup alternately as including the self and as excluding the self: the tendency to perceive the outgroup as being more homogeneous than the ingroup is more marked in the first case than in the second. Park and Judd (1990) mention two studies to confirm their proposition. In the first, having expressed a number of judgements of variability, subjects are asked to describe themselves and four members of either the ingroup or the outgroup. Results indicate that the image of the self is linked to the perceived variability of the ingroup, not the outgroup. In particular, the authors note that, the more subjects differentiate between themselves and the central tendency of their group, the more they perceive this group as being variable. This result does not really come as a surprise (see also Judd & Park, 1988). Another result from this study backs the model even more convincingly: in the case of the ingroup, judgements of variability are linked to the variability established on the basis of descriptions of four of its members, whereas such a relationship is not highlighted for the outgroup. In the second study referred to, subjects have to think aloud when fashioning their judgements of variability: they have to describe what comes to mind when they respond. An analysis of the comments made by subjects indicates that the self is mentioned more frequently when they judge the ingroup rather than the outgroup, a finding which confirms the model's validity. One further observes that individuals are mentioned more frequently when subjects refer to the outgroup rather than the ingroup, a result which contradicts the model. A more detailed examination of comments made by subjects suggests that they think of the ingroup mainly in terms of sub-groups.

Meaningful Sub-groups and Perceived Variability

In the wake of these studies, Park, Ryan, & Judd (1992) developed the idea that judgements of variability are mediated by the number of meaningful sub-groups which subjects possess for a given group. It appears that information on groups is organized on the basis of a structure comprising different sub-groups or sub-types, and that such a structure is more differentiated in the case of the ingroup. This proposition is often put forth and has been occasionally supported (Brewer, Dull, & Lui, 1981; Brewer & Lui, 1984; Linville, 1982; Linville & Jones, 1980; Taylor, 1981). Two studies carried out by Park, Ryan, & Judd (1992) provide a clear illustration of this hypothesis. In one of these

studies, business and engineering majors are asked to enumerate and to describe the different sub-groups which come to mind when they think about the students in their own group and those in the other group, after which they express various judgements of variability. Results reveal that subjects mention a greater number of sub-groups for the ingroup than for the outgroup, and also that they perceive the former as being more heterogeneous than the latter. The greater the number of sub-groups mentioned by subjects for the ingroup rather than the outgroup, the stronger the outgroup homogeneity effect. The idea that meaningful sub-groups constitute a key factor in the perception of variability is backed by the second study; here, subjects perceive a given group as being more variable if, during a previous task, they are asked to consider its different sub-groups.³

Mental Distributions and Perceived Variability

Considering that existing models were inconclusive, Kraus *et al.* (1993) developed a new model. In their opinion, when summarizing a group's central tendency and variability on a given characteristic, subjects create mental distributions, or frequency histograms, which include different categories. Subjects recall the frequency of observation for each alternative. In other words, they keep a mental tally of the number of people who fall into each category, updating their mental distributions as they encounter more people. In this model, judgements are made using both on-line and memory-based processes. Subjects apparently store information on people in their memory and fashion their judgements on the basis of a sample of them. They "summarize" these people at the time of encounter, noting the relative frequency of the various alternatives. These mental distributions are abstractions, of course, but they cannot be equated with a global estimation of variability. Furthermore, judgements of variability in themselves seem to require a process of abstraction to go from distribution to global estimation.

In some ways, this model parallels the propositions concerning the role of meaningful sub-groups (Park, Ryan, & Judd, 1992). It seems likely that judgements of variability depend on the number of categories used by subjects to create their mental distributions: the greater the number of alternatives, i.e. the more these distributions are detailed, the greater the perceived variability

³ We should point out that some authors have opposed the idea that the ingroup is characterized by a more complex structure of knowledge than the outgroup. In the opinion of Ostrom *et al.* (1993), information on the ingroup and outgroup is not organized or structured in the same way, although the structures do not necessarily differ in regard to their complexity. The experiments conducted by these authors suggest that knowledge tends to be structured in terms of persons for the ingroup and of attributes for the outgroup, but they also demonstrate that these structures can be equally efficient when it comes to memorizing certain items of information (see also Carpenter, 1993).

of the group (Kraus *et al.*, 1993, Experiment 1). This model can therefore be used to explain the outgroup homogeneity effect. Indeed, even when subjects think of one specific characteristic, they spontaneously generate more subgroups for the ingroup than they do for the outgroup (Kraus *et al.*, 1993, Experiment 2).

Variability as a Consequence of Similarities and Differences

Among recent models, we should mention also that of Kashima and Kashima (1993) pertaining to global judgements of variability. This relatively simple model draws its inspiration from several propositions by Tversky (1977) on judgements of similarity. Global judgements of variability result from similarities and differences perceived between the members of a group. Thus, the quantity of information available to subjects is a determining factor only if one takes account of what such information has to say about the similarities and differences within a group. Stated differently, an increase in the quantity of information may reduce perceived variability when such information relates to group similarities, or increase perceived variability when it relates to differences within the group. These two types of information are distinct, yet additive.

The results of the experiment undertaken by Kashima and Kashima (1993) confirm the main propositions of their model. They vary the quantity of information which subjects possessed on the similarities and differences between four members of a fictional group. The more subjects have information on the similarities between these four members, the more they perceive them and the group as a whole as having low variability. On the other hand, the more subjects have information on the differences between these four members, the more they perceive them and the group as a whole as having high variability. Similarities and differences play the role which can be expected of them, and the absence of interaction between the two factors suggests that they are additive. Nonetheless, one should note that these results are more definite when judgements of variability pertain to the members of the group rather than to the group as a whole. Furthermore, the operationalization of the distinction between information on similarities and information on differences is confounded with the distinction between information on the group as a whole and information on the group's individual members.

Although this model does not directly address the issue of asymmetries in judgements of variability, it is nonetheless helpful in explaining such asymmetries, using two distinct principles to do so. Either one considers that subjects have more information of one kind concerning one of the two groups—for instance, if they possess more information on similarities of the outgroup, an outgroup homogeneity effect should normally be highlighted. Or one considers that subjects have an equal amount of information of each kind on both

groups, but that one type of information is more salient for one of the two groups—for instance, if similarities are more salient in the case of the ingroup, an ingroup homogeneity effect should normally be highlighted. The validity of this type of argument is illustrated by an experiment conducted by Mackie, Sherman, & Worth (1993, Experiment 2). Having induced a categorization allegedly on the basis of a perceptual task, subjects receive information on the similarities and differences within the two groups. Not only do subjects perceive the ingroup as being more heterogeneous than the outgroup and recall more easily the similarities of the outgroup than those of the ingroup, but the more they recall the similarities between the members of a group, the more they perceive such a group as being homogeneous. These results are compatible with the model discussed above, except that no link is brought to the fore between perceived variability and the memorization of information on differences. The greater role played by similarities in this instance may possibly be explained by the fact that, when subjects have only limited knowledge of a group, they pay particular attention to the similarities between its members (Campbell, 1956).

Lengthy developments would be necessary to give a full account of the contributions and limitations of the various models presented in this part (see also Linville & Fischer, 1993; Mackie, Sherman, & Worth, 1993; Park, Judd, & Ryan, 1991). At this stage, we should like only to point out that cognitive approaches are epitomized by a common concern: to highlight the processes used by subjects when they deal with various items of information and when they fashion their judgements.

MOTIVATIONAL APPROACHES

The explanatory principles we are about to review emphasize motivational rather than cognitive processes. The idea here is to explain asymmetries in judgements of variability through their underlying motivations. We pointed out earlier that cognitive approaches were inspired by models in the field of social cognition; motivational approaches for their part generally base themselves on “classical” motivations when attempting to describe human behaviour. We should also mention that motivational approaches, as opposed to their cognitive counterparts, appear to have developed in a somewhat disjointed manner. As a consequence, one motivation is usually examined without necessarily including or precluding the intervention of other motivations.

The Need for a Positive Social Identity

One of the most frequently posited motivations is the need for a positive social identity. The pivotal role which this motivation plays in the social

identity theory (Tajfel & Turner, 1986) has often been underscored. In this approach, social identity is defined through the comparisons which subjects make between ingroup and outgroup. Underlying these comparisons is the need to establish or to preserve a positive social identity. Two types of research back the idea that the ingroup homogeneity effect stems, at least in part, from such a motivation: the first focuses on the relations between minority and majority groups, while the second highlights asymmetry modulations in regard to dimensions of judgements.

Numerous studies indicate that intergroup perception and behaviour depend on the numerical status of the groups under consideration, i.e. on their relative size (Moscovici & Paicheler, 1978; Sachdev & Bourhis, 1984). Using as a starting point the psychological consequences of this parameter, Simon and Brown (1987) examine its effects on judgements of variability. Being part of a minority group appears to threaten the self-esteem of subjects. One possibility of responding to this threat is for subjects to increase their homogeneity. In so doing, they mould a stronger entity and display greater solidarity than the outgroup. In other words, "closing ranks" leads to the preservation or re-establishment of a positive social identity. Subjects belonging to a majority group do not experience a threat to their self-esteem, which is relatively assured in this instance. As a result, such subjects tend to emphasize their heterogeneity: they attempt not so much to assert themselves as a group but rather to demonstrate that they form a sum of individualities contrasting with the uniformity of the outgroup.

In the experiment conducted by Simon and Brown (1987), subjects are categorized allegedly on the basis of a perceptual task; they are also made aware of the size of each group. The researchers modify independently the size of the ingroup and outgroup. As the propositions of these authors suggest, the members of the minority group display an ingroup homogeneity effect, whereas those of the non-minority group display an outgroup homogeneity effect. Considering that these effects depend on the numerical status of the ingroup rather than on the size of the outgroup, the results may not be viewed as a simple trend whereby small groups are perceived as being more homogeneous than large ones. In addition, responses given by subjects in a control condition, i.e. where subjects are not allocated to groups, show no consistent effect to back such a trend. Finally, the interpretation of the authors is supported by the fact that subjects placed in minority groups identify more with their group than those placed in non-minority groups (see also Simon & Pettigrew, 1990). A study by Bartsch and Judd (1993) also confirms that the ingroup's minority status and not simply its size accounts for its relative homogenization (see also Haslam & Oakes, 1995; Judd & Bartsch, 1995; Simon, 1995).

Other research suggests that the need for a positive social identity represents a motivation underlying judgements of variability. In line with social

identity theory (Tajfel & Turner, 1986), the fact of belonging to a given group contributes to the development of a positive social identity, on the condition however that the characteristics associated with this group compare favourably with those of other groups, i.e. that there be an evaluative difference in favour of the ingroup. By emphasizing the homogeneity of the ingroup on dimensions with positive evaluative connotations or simply on dimensions which are important for their identity, subjects preserve or establish the distinctiveness of the ingroup. This idea is illustrated by Kelly's study (1989) with English students who are Labour party sympathizers. Asymmetries in judgments of variability vary according to the importance which groups attach to given dimensions. This study is presented to the subjects as pertaining to images which Labour and Conservative party sympathizers have of one another. The task of subjects consists in judging homogeneity within the two parties on the basis of themes or values where an obvious opposition of views prevails, and on the basis of personality traits. Results show that subjects perceive the Labour party as being more homogeneous than the Conservative party with respect to political themes, whereas the reverse applies when it comes to personality traits. These results may be interpreted in different ways. Nonetheless, it seems clear that subjects strive to make their group relatively distinctive, possibly in order to gain a positive social identity.

An experiment conducted by Simon (1992a) indicates that perceived homogeneity is stronger in the ingroup than the outgroup on dimensions associated with the ingroup, whereas no such difference can be observed on dimensions associated with the outgroup. In a similar vein, it is worth mentioning Simon and Pettigrew's experiment (1990), in which researchers carry out an asymmetrical categorization. Here, only one group is explicitly defined, the existence of the other group being inferred on the basis of the existence of the well-defined group (the second group is made up of people who do not belong to the first group). Broadly speaking, results suggest that members of the well-defined group emphasize their homogeneity on dimensions which are specific to them, whereas members of the ill-defined group emphasize their homogeneity on alternative dimensions (i.e. dimensions not associated with the definition of the other group). Given that the members of an ill-defined group possess no distinctive characteristics, they will seek dimensions on which they are likely to increase their homogeneity and thus acquire some distinctiveness.

Assimilation and Differentiation between the Self and Others

Subjects do not merely seek to preserve or to establish a positive image of themselves. They also feel the need to be similar to others or to maintain their uniqueness, as demonstrated by the literature on social comparison processes (Codol, 1984b). For a long time, the idea that subjects compare themselves to

people who resemble them and associate with such people was upheld (Festinger, 1954). However, such an idea was discarded when it became obvious that subjects seek to evade situations in which their feeling of uniqueness is threatened (Snyder & Fromkin, 1980). With a few exceptions (Codol, 1975), these motivations are conceptualized as opposite forces. Indeed, there seems to be a basic conflict between the need to resemble others and the need to be a unique being (Ziller, 1964).

Brewer's model of optimal distinctiveness (1991) is based on this very conflict. According to the author, identity stems from a tension between two opposite needs: the need for assimilation, which refers to the inclusion of the self and others in a social category defined by shared characteristics or common interests, and the need for differentiation, which refers to the exclusion of others in the definition of the self. Whether these needs are met or not depends, at least in part, on the ingroup's level of inclusion (i.e. the number and diversity of people who may be classified as being part of the ingroup). Groups may vary with respect to their position on this dimension: they may be more or less inclusive, or more or less exclusive. Individual security and well-being are threatened at either extremity of this dimension: excessive depersonalization no longer offers a basis for self-definition, while excessive individualization renders one vulnerable to isolation and stigmatization. Consequently, any movement in the direction of either extremity activates an opposite tendency to restore the balance. Optimal distinctiveness is attained by identifying with a group whose level of inclusion meets both needs: assimilation and differentiation. Stated differently, subjects avoid definitions of the self which are likely to be either too inclusive or overly personalized.

This model can be used to understand judgements of variability within the ingroup (Brewer, 1993). Such judgements seem to depend on factors which influence ingroup distinctiveness, such as a group's size or its level of inclusion. The attention paid to distinctions between the self and others varies according to whether one's categorization as a member of the group is optimal in regard to distinctiveness. Thus, the classification of the self as a member of a highly inclusive group, inasmuch as it does not meet the need for differentiation, increases the attention paid to distinctions between the self and other members of the group. Consequently, the more the group is inclusive, the more it will be perceived as being heterogeneous. When the ingroup is exclusive, however, one can expect the need for assimilation not to be met; here, homogeneity will be emphasized. These considerations do not, however, reduce to the simple postulate that inclusive groups are more heterogeneous than exclusive groups. The motivational forces which come into play in this model only apply in the case of the ingroup. From the point of view of their identity, subjects are relatively indifferent to the distinctiveness of the outgroup.

These propositions do not have a direct bearing on asymmetries in judgements of variability. Furthermore, no study has clearly demonstrated that the

needs for assimilation and for differentiation intervene in such asymmetries. Nonetheless, they help us to understand better the differences observed between majority and minority groups (Mullen & Hu, 1989; Simon, 1992b) and also the reason for which the outgroup homogeneity effect is observed mainly in research on natural groups, which are often quite inclusive (Mullen & Hu, 1989; Ostrom & Sedikides, 1992).

Justifying Discriminatory Behaviours and Protecting Oneself against Them

In the domain of intergroup relations, one often comes across the idea that the homogenization of the outgroup induces the adoption of behaviours which discriminate against it (Miller & Brewer, 1986; Wilder, 1986). Three experiments conducted by Wilder (1978) clearly illustrate this phenomenon: discrimination against the outgroup is stronger if such a group is perceived as being a relatively homogeneous entity. These results may be interpreted in various ways. For instance, one may conclude that the heterogenization of the outgroup makes the borders between groups less well-defined, thus reducing the intergroup nature of the situation. If this were true, a weakening of the tendency to favour the ingroup would come as no surprise. However, two subsequent experiments suggest that such an interpretation is not always fitting (Simon *et al.*, 1990; Vanbeselaere, 1991). Indeed, even in instances where distinctions between the groups are relatively well defined, outgroup heterogenization reduces evaluative discrimination. In these experiments, the level of outgroup and ingroup variability is manipulated by the authors. Results are convergent: outgroup homogenization increases favouritism towards the ingroup, whereas ingroup homogenization has no effect.

It would appear from the above that discriminatory behaviours against a group are encouraged or justified if it is perceived as being a homogeneous and dehumanized entity made up of identical or interchangeable members. Furthermore, one may conclude that it is more difficult to discriminate against a group forming a heterogeneous entity composed of singularities. Intragroup variability is treated in these studies as an independent variable and its impact on intergroup behaviour is assessed. Nonetheless, they come up with a motivational explanation for the outgroup homogeneity effect: subjects are motivated not only to perceive the outgroup as being homogeneous (in order to justify discriminatory behaviours against it) but also to give the impression that the ingroup is relatively heterogeneous (so that it can protect itself against discriminatory behaviours) (Wilder, 1986). To date, no experiment has been conducted to test this explanation. However, a study by Worchel and Andreoli (1978) appears to confirm its validity, demonstrating that the anticipation of aggressive behaviour towards other people goes together with their de-individualization, whereas the anticipation of friendly behaviour goes together with their individualization. If subjects expect to have to inflict electric

shocks on a person, they recall mainly de-individualizing information, such as that person's age, place of residence or origins. On the other hand, when they expect to have to reward a person, they recall mainly individualizing information, such as that person's name and personality or physical traits.

Validating the Opinions to which One Subscribes

The tendency to homogenize the outgroup does not stem merely from the more or less bellicose intentions one may have in its regard. Other motivations also come into play, as underscored by research focusing on judgements of persons sharing or not sharing the same opinions as the self. On the basis of several postulates prevailing in the field of social comparison and attribution, Goethals, Allison, & Frost (1979) argue that the need to validate one's opinions, i.e. to feel that they are correct, underlies judgements of variability. These authors suggest that subjects are able to increase the confidence in their opinions in two different ways. Either they can believe that a relatively significant proportion of people hold the same opinions as they do, or they can believe that these people have relatively heterogeneous values, attitudes or fields of interest. Even though subjects have to yield to reality when evaluating the number of people who hold the same opinion as they do, by increasing the heterogeneity of these people, they can succeed in convincing themselves of the validity of their own opinions. In fact, this second tendency affords subjects the possibility of believing that the consensus to which they subscribe cannot be reduced to a common bias, that it does not reflect their personal characteristics, but rather that it stems from the object itself or, to use a word coined by Kelley (1967), from the entity. Clearly, an opinion based on characteristics shared by the people who hold this opinion is less credible than an opinion based on the nature of the object.

Even though the first tendency appears to be more general than the second (Manstead, 1982), both contribute to the validation of opinions held by subjects, who thus successfully convince themselves of the relevance of such opinions and discredit contrary points of view. When held by a limited number of people and stemming from characteristics suggesting that these people form a homogeneous entity, contrary points of view are necessarily invalid or biased. Three studies provide an illustration of this argumentation (Goethals, Allison, & Frost, 1979). Be it with respect to feminism, to action taken by the President of the United States or to trade ties with South Africa, subjects overestimate the proportion of people who hold the same opinions as they do and perceive such people as being more heterogeneous than those holding a contrary opinion. These results may be interpreted in numerous ways, as the authors do not fail to point out. Instead of postulating that subjects perceive people who share the same opinions as being relatively heterogeneous, one could just as easily assert that subjects adopt an opinion because it is shared

by relatively heterogeneous people. Furthermore, ingroup heterogenization may well result from a belief that only ingroup opinions are valid, rather than be a way of validating such opinions.

However, other results may be interpreted in line with the above approach. An experiment conducted by Simon and Mummendey (1990) shows that, when subjects lack explicit information on the size of groups, they believe that the ingroup is larger and more heterogeneous than the outgroup. These findings tie in with the results obtained by Kelly's study (1989) in which subjects perceive the members of the Labour party, with whom they have some affinity, as being more homogeneous than the members of the Conservative party with respect to political themes, whereas they perceive the members of the Labour party as being more heterogeneous than the members of the Conservative party when it comes to personality traits. There is little doubt that internal divisions represent a handicap for a political party. Accordingly, it is important to preserve the party's cohesion, at least in areas which constitute its specificity. On the other hand, if a party has relatively heterogeneous personalities in its ranks, it is less easy to cast aspersions on the stances which it takes up. Even in groups such as political parties or religious communities, which must *a priori* be homogeneous, internal heterogeneity may answer certain needs (see also Kelly, 1988). In particular, it may help members increase their self-confidence in instances where they have to defend a point of view to which they subscribe.

Making the Outgroup Predictable

One final motivation frequently posited in this field is the need to make the outgroup predictable. Several studies underscore the fact that subjects differentiate more between people they dislike than between those with whom they have some affinity (Irwin, Tripodi, & Bieri, 1967). This tendency probably stems from the threat represented by the people they dislike. When faced with such people, who represent a source of anxiety, subjects are particularly watchful (Miller & Bieri, 1965). This increased attention leads to a tendency, on the part of subjects, to differentiate between these people and to articulate them in a relatively complex manner. The aim is to reduce anxiety by making their behaviours predictable (Kelly, 1955). In other words, being able to differentiate between people in regard to whom they experience negative affects gives subjects the impression of being better able to manage the threat they represent, insofar as their behaviours become predictable. Such an impression results in reduced anxiety.

Stephan (1977) argues that the above explanation, developed in connection with judgements of individuals, can be transposed to judgements of groups. Outgroups are generally evaluated negatively by subjects and are frequently viewed as a threat. If they know in advance how the members of a group are

going to behave, subjects feel better prepared to interact with them, which results in a lower level of anxiety. In this approach, an outgroup may thus be expected to be perceived as being more heterogeneous than an ingroup. The results from a study conducted by this author are compatible with the aforementioned explanatory principle: when schoolchildren of different ethnic backgrounds are asked to describe, on the one hand, their ethnic group and, on the other, two ethnic groups to which they do not belong, they apparently perceive the two latter groups as being more heterogeneous than the former.

We should point out that an explanation based on the need to make the outgroup predictable may well lead to an opposite tendency, i.e. to the homogenization of the outgroup. Some studies suggest that, the more a group is homogeneous, the more subjects feel that they are able to predict the behaviours of its members. Indeed, intragroup variability reduces the tendency to generalize, to the group as a whole, an observation made in regard to a single individual (Nisbett *et al.*, 1983; Park & Hastie, 1987; Quattrone & Jones, 1980): the lower the perceived variability of the group, the stronger the tendency to generalize. Subjects believe that a homogeneous group is a predictable group. Increasing the homogeneity of the outgroup could be one way of making "functional" assumptions on how to behave with its members (Quattrone, 1986; Quattrone & Jones, 1980). If subjects perceive the outgroup as a homogeneous entity, the knowledge they have of that group applies to a majority of its members. As such, they will feel that their knowledge is general and stable, and that it provides them with largely unambiguous assumptions on the way to behave with the members of that group.

INTEGRATING COGNITIVE AND MOTIVATIONAL FACTORS

We should mention that, while cognitive approaches are almost exclusively centred on the outgroup homogeneity effect, motivational approaches usually indicate that such an effect is not a permanent feature and that an ingroup homogeneity effect may sometimes be observed instead. At first sight, the gap between cognitive and motivational approaches appears difficult to fill. The opposition between these two approaches is easily understood if one considers their respective underlying models (Marques, 1993): in cognitive approaches, subjects have a role not unlike that of an observer, whereby they deal with information according to their capacities and express judgements on the basis of what information is in their possession; in motivational approaches, subjects are committed by their perceptions and they make judgements of strategic value.

Cognitive and Motivational Factors in Judgements

The approach developed by Marques (1993; Marques, Robalo, & Rocha, 1992; Marques & Paez, 1994) does not set out to determine which is the better of the two models. Instead, it argues that both models coexist within subjects. This postulate reconciles the cognitive and motivational approaches, even in instances where the two lead to diametrically opposed predictions. Linville (1982; Linville & Jones, 1980) suggests and illustrates that evaluative judgements are less extreme when they pertain to a member of the ingroup than to one of the outgroup. According to this author, such a tendency stems from the fact that subjects possess a richer and more complex cognitive schema for the ingroup than they do for the outgroup, which leads them to better qualify a judgement pertaining to a member of the first group than to one of the second. However, on a number of occasions, Marques (1990; Marques, Yzerbyt, & Leyens, 1988) brings to the fore an opposite tendency whose purpose is to preserve the social identity of subjects. The author talks of a “black sheep effect” to describe the fact that people whose behaviour is considered undesirable or not conforming to social norms are more belittled if they belong to the ingroup rather than to the outgroup, whereas the reverse applies for desirable behaviour which conforms to social norms.

If one accepts that judgements depend on cognitive factors in some instances and on motivational factors in others, it is possible to reconcile the above results. In certain conditions, it appears that judgements are based on knowledge stored in the memory of subjects, and that judgements stemming from such knowledge are more qualified when they pertain to a member of the ingroup than to one of the outgroup. In other conditions however, when subjects are confronted with a member of the ingroup who contributes to their social identity in a negative manner, they launch into a process aimed at maintaining their social identity: here, the relative belittling of the member of the ingroup aims at preserving the global value of the group. A study by Branscombe *et al.* (1993) provides details on the conditions which produce one particular judgement rather than another. It demonstrates that, in situations where there is a low level of identification between the subjects and the group to which they belong, judgements are more moderate in the case of ingroup members than in that of outgroup members, whereas when there is a high level of identification, a black sheep effect is observed.

Judgements of variability also depend on cognitive or on motivational factors, as the case may be. To be more precise, it would seem that judgements of the outgroup are based rather on knowledge of it, whereas judgements of the ingroup are based rather on a motivational factor related to the group's social identity (Marques, Robalo, & Rocha, 1992, Experiment 2). These findings may be paralleled with Brewer's propositions (1993) which state that motivational aspects come into play mainly in the case of judgements of the ingroup.

Furthermore, it would appear that the cognitive and motivational registers are more dissociated in judgements of the ingroup than they are in those of the outgroup (Marques, Robalo, & Rocha, 1992, Experiment 2).

A Model of Egocentric Social Categorization

The model of egocentric social categorization developed by Simon (1993) is yet another approach integrating the two registers. It describes the way in which subjects cognitively construct social categories. The fundamental postulate of this model is that subjects tend to make egocentric cognitive differentiations, at least in societies whose culture is marked by individualism (Triandis, 1990). This means that differences between the self and others are more distinct than differences between other people. This proposition is backed not only by the fact that subjects possess a greater quantity of information on themselves but also by their need for singularity or uniqueness (Snyder & Fromkin, 1980). Thus, the basic level of cognitive differentiation is the level between "me" and "not me".

The knowledge which subjects have of any given person may be represented by a set of characteristics. When subjects think about the differences between two people, the characteristics which distinguish them from one another are salient rather than the characteristics which they have in common (McGuire & McGuire, 1988). When subjects make a categorization between "me" and "not me", the salient characteristics which they use to regroup certain people under the "not me" label are those which distinguish these people from the self. The characteristics which they share with certain people are not salient; the only characteristics which come to mind are those which make them a unique being. However, of all the people placed in the "not me" category, all of whom belong to outgroups, some probably share one or more salient characteristics.

This egocentric tendency in cognitive differentiations makes the construction of an ingroup more difficult for subjects; indeed, such a process requires the ability to perceive characteristics shared with other people, none of which are salient. The construction of outgroups is easier: among the people grouped under the "not me" label, some share at least one salient characteristic. Consequently, an ingroup will be perceived more as an aggregation of separate entities, whereas an outgroup will be perceived more as a homogeneous category (see also Allen, 1985), explaining why the ingroup is usually perceived as being more heterogeneous than the outgroup. However, we should also point out that factors which heighten identification with the group may thwart these egocentric tendencies. When this occurs, one observes a change in the level of categorization which involves a relatively symmetrical construction of the ingroup and outgroup.

At first sight, the above model would seem to call into play mainly cognitive factors. Nonetheless, its premises are founded on motivational and cultural

considerations. On the one hand, egocentric tendencies result at least in part from an individual motivation, namely the need to assert one's singularity. On the other hand, it appears that such a motivation is the earmark of societies whose cultures may be described as individualistic.

Levels of Categorization and Social Identity

The interplay between cognitive and motivational factors is even more obvious in the approach developed by Haslam *et al.* (1995; in press; see also Haslam & Oakes, 1995; Oakes, Haslam, & Turner, 1994) and based on self-categorization theory (Turner, 1985; Turner *et al.*, 1987). It may be worth recalling that self-categorization theory includes a series of postulates and hypotheses on the functioning of the self concept. The cognitive representation of the self takes the shape of a self-categorization process at varying levels of abstraction. Among these levels, one may differentiate between the level of the self as a human being or a member of the human species, the level of the self as belonging to a particular group to the exclusion of other groups, and the level of the self as a unique and specific individual. These different levels define respectively the human, social and personal identity of subjects. Self-categorization theory does not focus solely on the perception of the self; it also deals more generally with the similarities and differences perceived within a group of people. The salience of a level of categorization appears to lead to an accentuation of intracategory similarities and intercategory differences. In addition, given the functional antagonism prevailing between the different levels of categorization, the salience of one level of categorization hampers the perception of intracategory differences and intercategory similarities at other levels. Of course, this is reminiscent of several aspects of the process of social categorization (Tajfel, 1972; 1981).

At first sight, self-categorization theory appears to say nothing of possible asymmetries in judgements of variability (Turner, 1985; Turner *et al.*, 1987). What it postulates clearly is that the ingroup and outgroup are perceived on the basis of the same principles and that their cognitive construction is symmetrical. Indeed, one of the theory's stated objectives is to specify the conditions in which the ingroup and outgroup are perceived in a relatively symmetrical and homogeneous manner. But asymmetries in the perception of groups may exist outside these conditions.

The way in which a group of people is perceived, i.e. the level of categorization used, depends on contextual factors. In the case of the outgroup, judgements of variability often occur at least implicitly in a context of intergroup comparisons, whereas they occur more frequently in a context of interpersonal comparisons in the case of the ingroup (i.e. where there are no comparisons with an outgroup). This principle explains the outgroup homogeneity effect. However, judgements of variability pertaining to the ingroup may also

be based, in certain conditions, on intergroup comparisons, such as when social identities are salient, for whatever reason. When this occurs, one observes a symmetry in ingroup and outgroup perception.

Two studies involving Australian students back this approach (Haslam *et al.*, 1995). In the first study, subjects are asked to consider a list of characteristics and to select the five which best typify, in their opinion, the people of a given country, who can be either Australians or Americans. Subjects are then requested to evaluate the proportion of people to whom these characteristics apply. In one condition, they carry out this task solely for the people of the country which has been named. In the other condition, they are instructed that the task is to be performed both for the people of the country named and for those of the other country (respectively the Americans and Australians). Results indicate that subjects perceive the ingroup as being less homogeneous than the outgroup when they are asked to describe one group only, whereas this may not be said in the other condition. Furthermore, the ingroup is perceived as being more homogeneous when subjects describe both groups rather than only one, whereas the perception of the outgroup does not vary on this parameter. At this stage, the distinction between levels of categorization suffices to explain the results obtained.

The motivational aspects of judgements play a role in the evaluative orientation of chosen characteristics, given that subjects seem to select less favourable characteristics when describing the outgroup. This result would be trivial if it were not examined in light of the fact that subjects attribute less non-stereotypic characteristics to the ingroup than they do to the outgroup when describing the two groups. Stated differently, they freely acknowledge that a number of positive characteristics apply to the outgroup, but they are far more reluctant to apply negative characteristics to the ingroup. This disinclination appears even more clearly in a second study conducted on the basis of the same principle. Here, the list of characteristics submitted to subjects consists either of a combination of positive and negative characteristics, or of exclusively positive and exclusively negative characteristics. The reluctance of subjects to apply the non-stereotypic characteristics to the ingroup is most obvious when the list submitted to them consists exclusively of negative characteristics. These results may doubtless be explained by the threat which such a task represents for their social identity (Tajfel & Turner, 1986). Thus, the articulation in this approach occurs on the basis of the link existing between the process of categorization and the motivation which underlies the social identity of subjects.

It is possible to bring to the fore several similarities between the two approaches we have just examined. In both cases, the authors differentiate between different levels of categorization, while at the same time insisting that their salience may vary. However, this convergence of views should not conceal the obvious differences between the two approaches. Simon (1993)

proposes the concept of “quasi-intergroup situations” to describe contexts in which relations with members of the ingroup occur at the interpersonal level and relations with members of the outgroup occur at the intergroup level. But such a concept is difficult to accept if the existence of a functional antagonism between the different levels of categorization is acknowledged (Turner *et al.*, 1987). In addition, Simon (1993) postulates the existence of a basic level in categorizations (that between “me” and “not me”) which makes personal identity *a priori* more salient than social identity, an assumption not posited by the proponents of the self-categorization theory (Turner *et al.*, 1987; Haslam *et al.*, 1995; in press).

LEVELS OF ANALYSIS IN JUDGEMENTS OF INTRA-GROUP VARIABILITY

On a number of occasions, Doise (1984; 1986; see also Lorenzi-Cioldi & Doise, 1990) argues that the primary aim of experimental social psychology is to articulate different levels of analysis. We should recall briefly here that Doise distinguishes four levels of analysis: the intra-individual level, pertaining to psychological processes; the situational level, describing the interplay of social relations likely to develop in a given situation; the positional level, based on differences of status often characteristic of social relations; and the level of societal beliefs and representations.

A quick glance at the explanatory principles reviewed so far reveals that, more often than not, such principles relate to the intra-individual level of analysis. We are not for a moment suggesting that the authors whose work we have reviewed systematically disregard other levels of analysis; however, in their theoretical developments, they do not always give these levels due consideration. The primary concern of many authors remains, by and large, the understanding of the motivations and cognitive processes used by subjects when evaluating the variability within a group. Clearly, the intra-individual level of analysis alone cannot always account for asymmetries in judgements of variability. Considerations relating to cognitive processes and motivations should not be cast aside; rather, they should be integrated into an approach which takes full account of the relations between groups, their respective positions and the systems of beliefs and representations which are characteristic of the context in which such relations occur.

We feel that an undertaking of this kind would pave the way for an analysis of the conditions in which one explanatory principle is applicable rather than another. Having to choose among the plethora of explanatory principles is certainly no easy task. And although no one principle seems able to describe the entire set of empirical results at hand, all appear to be relevant. Rather than attempting to decide between various explanatory principles and

sometimes rejecting all but one, it would seem more worthwhile to analyse the conditions of applicability of each principle and even to articulate them. We have examined various models describing the way in which subjects organize their information on groups and express judgements of variability. The obvious discrepancies between these models certainly illustrate the wide range of subjects' cognitive processes. It is therefore important to determine the conditions in which a particular type of cognitive process is used (Park, Judd, & Ryan, 1991; Smith & Zarate, 1990). The different motivations referred to when explaining asymmetries in judgements of variability sometimes lead to contradictory predictions. This does not create a problem as long as the conditions in which a particular motivation underlies judgements of variability can be specified. However, defining the likely conditions of applicability of an explanatory principle almost inevitably requires going beyond the realm of intra-individual analysis.

A number of studies already suggest that judgements of variability should be examined in a less restrictive manner, i.e. not solely from the viewpoint of the intra-individual processes which they call into play. This corresponds to our own position on the issue. We now examine these studies against the backdrop of the different levels of analysis posited by Doise (1986).

The Intra-individual Level of Analysis

This level of analysis does not pertain exclusively to the cognitive and motivational registers, it also relates to affects. Stroessner and Mackie (1992; 1993) demonstrate clearly that the affective state of subjects has a bearing on their judgements of variability. In the three experiments described by these authors, the mood of subjects is manipulated by showing them a short film in order to induce in them positive, negative or neutral moods. Subsequently, the alleged behaviours of the members of a group are presented to subjects, such behaviours being more heterogeneous or more homogeneous depending on the conditions. The task of subjects consists in judging the variability of the members of the group. One observes clearly that subjects placed in conditions of neutral mood perceive the most heterogeneous rather than the most homogeneous group as having the highest variability, an observation which suggests that subjects are sensitive to the group's true variability (see also Judd, Ryan, & Park, 1991; Nisbett & Kunda, 1985). When subjects are placed in conditions of positive or negative mood, they do not "perform" as well, possibly because the affective state they experience mobilizes part of their attentional resources. Indeed, when subjects are given additional time to examine the behaviours submitted to them, their performance is no longer influenced by the affective state induced (Stroessner & Mackie, 1993, Experiment 3).

These authors do not set out to explain asymmetries in judgements of variability. Nonetheless, the role played by affects in asymmetries is certainly

worthy of consideration. An experiment similar to the above could be devised to determine how ingroup and outgroup variability judgements are mediated by the affective states of subjects. Underlining the role of affects is a useful enterprise, but defining the social conditions which mobilize a given affective reaction is equally important. What are the interactions which generate positive or negative affects? Conflictual interactions apparently tend to generate negative emotions such as hatred and anxiety, whereas cooperative interactions lead more easily to positive emotions such as joy and satisfaction (Stroessner & Mackie, 1993). Relations between groups may not always be characterized exclusively on the basis of their more or less competitive or cooperative nature; sometimes they may also relate to questions of domination and power. What affects are associated with these types of relations? The previously mentioned research undertaken by Islam and Hewstone (1993) on Hindu-Muslim relations in Bangladesh demonstrates that, the more subjects are anxious when they interact with members of the outgroup, the more they perceive the outgroup as being homogeneous. In addition, Hindus are apparently more anxious than Muslims when they interact with members of the outgroup. Finally, the relationship between anxiety and perceived homogeneity is more marked in Hindus than in Muslims. When interpreting such differences, the authors do not fail to take account of the positions occupied by the two groups in Bangladesh: Hindus constitute a dominated minority group, whereas Muslims constitute a dominant majority group. As can be seen here, taking account of the influence of intra-individual factors in judgements of variability does not prevent, and in some instances even requires, the inclusion of factors pertaining to different levels of analysis.

The Situational Level of Analysis

Analyses carried out at the situational level underscore more particularly the fact that different situations or social contexts mobilize specific psychological dynamics. This point may be illustrated by demonstrating that when relations, interactions or modes of contact between groups vary, judgements of variability are modified. An experiment by Judd and Park (1988) is useful in this regard. It shows that relations between groups have a bearing on the cognitive processes of subjects. During each session eight subjects, divided into two groups allegedly on the basis of their responses to a perceptual task, are requested to anticipate either a cooperative or a competitive interaction between the groups. First, subjects mention some items of information on themselves, such as their age, name, and place of origin. Then, they express a number of judgements on the central tendency and the variability of the two groups. Finally, they are invited to recall information on the members of each group. Results are unambiguous: when subjects anticipate a competitive interaction with the outgroup, an outgroup homogeneity effect is observed, a

phenomenon which does not occur when a cooperative interaction is anticipated. In other words, the outgroup is perceived as being more homogeneous if subjects expect to have to compete rather than cooperate with it. Furthermore, the memorization of information on members of the outgroup is more efficient in the first case than in the second. These results are interesting in various respects. On the one hand, the homogenization of a group may conceivably be accompanied by an increase in the attention paid to the individual characteristics of its members. On the other hand, the interactions anticipated by subjects influence their judgements. From the above, one may conclude that the processes used by subjects to deal with information on groups are intimately linked to the situations in which they find themselves.

A similar reasoning may be developed in regard to the motivations underlying judgements of variability: they also depend on the relations between groups. Rather than examining Judd and Park's results (1988) relating to the cognitive processes which subjects call into play, it may be worthwhile to examine the motivations mobilized by the relations which are induced. The outgroup homogeneity effect observed by these authors may possibly stem from the need to justify the competitive behaviours anticipated by subjects (Wilder, 1986). As for the heightened attention paid to the individual characteristics of outgroup members in instances where subjects expect to compete with them, it may possibly be explained by the need to make the outgroup predictable (Stephan, 1977).

According to Brown and Wootton-Millward (1993), judgements of variability assist in developing and maintaining social identities, although the intensity of this motivation clearly varies according to the social context. It turns out that subjects feel particularly motivated to increase their relative homogeneity when the groups have just formed or at key moments in their history; this is especially true with respect to dimensions deemed important in terms of social identity. Based on this type of consideration, the experiment conducted by Worchel, Coutant-Sassic, & Grossman (1992) indicates that motivations underlying judgements of variability vary according to the manner in which interactions between the groups take place. Suffice it to say, without going into the precise details of this experiment, that when groups have just formed, subjects strive to create a positive social identity for the ingroup and to preserve its unity. As a result, they are going to emphasize the homogeneity within the group and perceive the outgroup as being somewhat disorganized. This motivation is particularly strong if the two groups previously formed only one. After a series of competitive interactions between the groups, and once the groups have moulded their own identity, the motivations are going to change: the interest will focus on the efficiency of the group and on the individual goals of its members. At this stage, it becomes desirable to perceive the ingroup as being relatively heterogeneous. Indeed, if a group is composed of members with varying levels of skills, it will be more successful

in carrying out the tasks attributed to it and will show greater efficiency. Furthermore, acknowledging the internal diversity of a group affords its individual members greater freedom in the pursuit of their own personal objectives.

The introduction of situational factors in the study of judgements of variability is also likely to improve one's understanding of the role played by a factor such as familiarity. The view is generally held that, the more one is familiar with a group, the more one perceives it as being heterogeneous (Linville, Fisher, & Salovey, 1989). However, this relationship is not always confirmed (Jones, Wood, & Quattrone, 1981; Park, Ryan, & Judd, 1992; Simon, Glässner-Bayerl, & Stratenwerth, 1991). In certain conditions, an increase in familiarity may even lead to the perception of increased homogeneity within the group (Oakes *et al.*, 1995; Simon, Kulla, & Zobel, 1995). In instances where interactions with the outgroup tend to occur in contexts where the groups are highly constrained by social roles, an increase in the frequency of such interactions may accentuate the homogeneity perceived in the outgroup (Quattrone, 1986). We know for a fact that social roles generate a certain uniformity in behaviour. Thus, subjects infer from what they observe that the members of the outgroup are all alike, at least on the behavioural dimensions apparent during such interactions. Being repeatedly exposed to the same type of information gradually strengthens the impression that the outgroup is homogeneous. The role frequently attributed to familiarity in judgements of variability is reminiscent of the role which contacts between groups are sometimes thought to play. However, an overview of reflections on this issue reveals that the effects of contacts between groups depend more particularly on the nature of such contacts and on the relations existing between the groups under consideration (Amir, 1969; Hewstone & Brown, 1986; Stephan, 1987).

The Positional Level of Analysis

Groups only rarely occupy interchangeable positions: usually, one group enjoys a more favourable position than the other. The criteria on which these hierarchies are based are diverse. We have seen that some authors study the role played by the numerical status of groups in judgements of variability (Simon & Brown, 1987; Simon & Pettigrew, 1990), demonstrating that an outgroup homogeneity effect is more probable in members of a majority group, while an ingroup homogeneity effect is more frequently observed in members of a minority group. We have also pointed out that these authors offer a motivational explanation for such differences. A more cognitive explanation may also be developed. Take Mullen (1991) for instance, who argues that information on a majority group is dealt with according to information on its exemplars, whereas information on a minority group is

dealt with according to the prototype associated with that group. In this approach, subjects perceive the majority group as being more heterogeneous than the minority group, and this whatever their own group membership.

Relations between majority and minority groups cannot be reduced to a simple numerical factor. It seems likely that the meanings which are attributed to minority groups are decisive: indeed, such groups are frequently associated with ideas of error, inferiority, deviance or weakness (Simon, 1992b; Tajfel, 1981). This being said, the relative positions of groups may also be defined in terms of social status, power and prestige. Sometimes, these different criteria may co-vary, as illustrated in the research carried out by Brown and Smith (1989) on relations between men and women in British universities. In this environment, as in many other professional sectors, the numerical majority which men enjoy goes hand in hand with their occupying positions of greater power and prestige. The results of this study indicate that, whatever the gender group to which they belong, subjects perceive women as being more homogeneous than men. The research carried out by Hewstone, Islam, & Judd (1993, Experiments 1 and 2) is also useful in this regard: it shows that a religious group to which one does not belong is perceived as being more homogeneous than a religious group to which one does, on the condition that the latter group is located in a country where it enjoys a dominant and majority position.

In the above-mentioned research, positional asymmetries between groups are characterized not only on a numerical basis but also according to differences in social status, power and prestige. However, the various criteria are not always linked in such a manner. Sometimes, numerically inferior groups are dominant. Simon and Hamilton (1994, Experiment 2) conducted an experiment in which the social status and majority or minority nature of the ingroup are independently manipulated. Here, subjects are categorized allegedly on the basis of their aesthetic preferences. The relative size of groups is manipulated according to usual procedures (Simon & Brown, 1987), whereas their status is manipulated by informing subjects that one of the painters whose works are presented (either their preferred painter or the one they most dislike) enjoys greater consideration and is better received than the other one. Results show that members of the high-status majority group perceive their group as being more heterogeneous than the outgroup, whereas members of the high-status minority group perceive their group as being more homogeneous than the outgroup. In the two other possibilities, no asymmetry in the perception of intragroup variability is brought to the fore.

All these results are not fully convergent. Nonetheless, they do suggest that dominant groups are often perceived as heterogeneous entities, whereas dominated groups are easily homogenized (see also Simon, Glässner-Bayerl, & Stratenwerth, 1991; Simon & Hamilton, 1994, Experiment 1). The differences between dominant and dominated groups often take the shape of relatively

contrasted intergroup representations: in terms of individual specificities for the group enjoying a dominant position and in terms of a collective lack of differentiation for the dominated group (Deschamps, 1982; Lorenzi-Cioldi, 1988; Lorenzi-Cioldi & Doise, 1990). In general, the members of dominant groups are perceived as forming an entity made up of singular or unique beings. Here, the group is no more than a voluntary association of individuals, based on the individual or idiosyncratic qualities which exist outside the group. As for the members of dominated groups, they are perceived more as forming an entity made of undifferentiated elements. There is a tendency on their part to mention much more frequently their social belonging or collective characteristics, which are sufficient for the purposes of self-definition. This opposition between dominant and dominated groups is only meaningful if the existence of a common symbolic referent is acknowledged, be it individuality, autonomy or singularity. Such a referent is in fact the cornerstone of dominant group representation. Indeed, groups are not closed systems which generate their particular systems of meaning: differences between groups only become apparent beyond a minimal threshold of common values. Thus, consideration of relations of domination bring another level of analysis into play: that of societal beliefs and representations.

The Level of Analysis of Societal Beliefs and Representations

A value is a persistently entertained belief that conducting oneself in a particular way is socially preferable to conducting oneself in a different way (Rokeach, 1973). Generally speaking, values take the shape of a model which human society proposes to its members. As we have just underscored, the model in our societies emphasizes autonomous and singular individuality. In this context, it is interesting to note that the term "individual" is often used to signify not only that we are or should be independent persons in control of our own lives, but also that we are or should be different to all other people. Stated differently, greater importance is given to what makes individuals different than to what they share or have in common (Elias, 1987). The singularity or uniqueness of beings is hailed, as opposed to what is common or generic (Simmel, 1890/1989). Accordingly, one may well wonder whether, in certain conditions, the outgroup homogeneity effect is analogous to the superior conformity of the ingroup effect (Codol, 1975). In situations where the respective position of groups is ill-defined, i.e. when subjects have little information on the groups, the occurrence of a process of this nature seems particularly likely.

Admittedly, values are social constructions which depend on the conditions in which they are produced. Accordingly, they are particular to a social and historical context. Intercultural comparisons shed some light on the role played by values in judgements of variability. In this domain, a common

distinction is the one made between individualist and collectivist cultures (Triandis, 1990), which encompasses numerous aspects. Suffice it to mention that, in the first type of culture, the individual is the basic element, personal goals come before those of the community, ties with others are distant and the value of singularity is enhanced. In the second type of culture, the community is the basic element, personal goals are subordinated to those of the group, ties with others are strong and the emphasis is placed more on the lack of differentiation. Various data indicate that, in these two types of culture, subjects do not perceive intragroup variability in the same manner. Lee and Ottati (1993) compare judgements of variability expressed by American and Chinese students with respect to the inhabitants of both countries. It turns out that an outgroup homogeneity effect is obtained in the former group, and an ingroup homogeneity effect in the latter. In view of the observation that American students attach greater value to heterogeneity than their Chinese counterparts, it is possible to conclude that these effects stem, at least partially, from systems of beliefs and representations particular to these cultures. Other results confirm that the members of an individualist culture perceive ingroups as being more heterogeneous than the outgroups, whereas the opposite may be observed with respect to the members of a collectivist culture (Triandis, McCusker, & Hui, 1990).

The role of systems of beliefs and representations can be illustrated in another way. It appears likely that subjects share a general belief that outgroups are relatively homogeneous (Wilder, 1981; 1984). In situations where they possess practically no information on a given outgroup, rather than assuming that the outgroup must be at least as heterogeneous as the ingroup, they base their perception of the outgroup on the belief that it constitutes a homogeneous entity. What they notice or retain with respect to the members of the outgroup, as well as the judgements they make in their regard, is determined by the belief they entertain. This is no different from a self-fulfilling prophecy process (Wilder, 1984): subjects assume that the outgroup is relatively homogeneous, the observations they make confirm their expectations, their judgements reflect such expectations, and their initial belief is reinforced as a result. From the above, we can also conclude that judgements of variability do not stem so much from the information to which subjects are exposed as from the information which retains their attention (Quattrone, 1986).

CONCLUSION

The relations between groups in a given situation, the positional asymmetries which exist between them as well as the systems of societal beliefs and representations all have to be taken account of when examining judgements of

variability. The study of cognitive processes and motivational dynamics requires the inclusion of factors outside the intra-individual level of analysis, although this in itself is not sufficient. This would lead to considering systematically the same types of causal relations between the different levels, thus restricting the analysis to the understanding of how certain social factors determine cognitive processes and motivational dynamics. However, judgements of variability also play an active role in social relations. When subjects evaluate variability within a group, they produce meanings and representations, in short part of social reality. Judgements of variability thus contribute to the fashioning of social relations. In particular, relations between groups are defined by means of such judgements, which create, justify or negate certain social divisions. Consequently, judgements of variability, cognitive processes and the motivations which they mobilize, while all modified by social relations, also play a pivotal role in the elaboration of such relations. Indeed, they frequently represent a means to shape, safeguard or transform social relations.

Having reached the end of this review, we are in a position to conclude that studies on judgements of variability are situated at the crossroads of current priorities in social psychology. Furthermore, it should be stated that such studies may lead to further developments. In this vein, the consequences of these judgements were examined more specifically. We noted that the perception of intragroup variability could have a bearing on the extremization of evaluative judgements (Linville, 1982; Marques, Robalo, & Rocha, 1992; see also Denhaerincx, Leyens, & Yzerbyt, 1989) and on the tendency to generalize to the group as a whole an observation made in regard to one individual (Nisbett *et al.*, 1983; Park & Hastie, 1987; Quattrone & Jones, 1980). Furthermore, it was recently demonstrated that low group variability goes together with the perception that such a group is consistent and that it forms an entity (McGarty *et al.*, 1995). Several studies suggest that perceived variability plays a role in the shaping of stereotypes (Ford & Stangor, 1992) and in their modification (Hewstone, Johnston, & Aird, 1992). In addition, it appears that the impact of stereotypes on the treatment of information relating to a member of a given group varies according to whether this group is perceived as being more heterogeneous or more homogeneous (Lambert, 1995; Lambert & Wyer, 1990).

Studies on judgements of variability also encourage us to reconsider certain questions such as the link between intragroup variability and intergroup differentiation. In the area of relations between groups, there is a tendency to base one's analysis on the premise that a negative link exists between differentiation within groups and differentiation between such groups (Tajfel & Turner, 1986). In other words, the homogenization of groups is accompanied by an increase in the differences existing between them. However, this proposition does not constitute a rule. The studies we have examined suggest in

particular that groups are not necessarily perceived as homogeneous entities. At least in certain conditions, the regrouping of individuals may stem from the perception of their heterogeneity. It is not easy to reconcile this observation with an approach based on the idea of a negative relationship between intragroup variability and intergroup differentiation. The links between the two are likely to be more complex (Doise & Lorenzi-Cioldi, 1989; Lorenzi-Cioldi & Doise, 1990). As a result, taking account of alternative ways of conceptualizing them is certainly very worthwhile. In this regard, it is necessary to give consideration to the idea that the two dimensions may co-vary (Deschamps, 1979; 1991; Doise, 1988): in certain conditions, intragroup variability and intergroup differentiation appear to increase or diminish concomitantly. Similarly, one should not disregard the possibility that the two may not be linked: the modifications of the former may not necessarily have a bearing on the modifications of the latter. Our duty is not to come out in favour of one conceptualization and reject all the others, once and for all. Rather, it consists in specifying the conditions in which these conceptualizations are likely to be observed.

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