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The study of minority influence began as reaction to the portrayal of influence as the province of status and numbers and from a realization that minorities need not just be passive recipients of influence but can actively persuade. From these beginnings, a considerable body of research, including ours, has investigated how minority views prevail. . In the decades that followed, we concentrated, not so much on persuasion or attitude change but, rather, on the value of minority views for the stimulation of divergent thinking. Dissent, as has been repeatedly documented, “opens” the mind. People search for information, consider more options and, on balance, make better decisions and are more creative. Dissenters, rather than rogues or obstacles, provide value: They liberate people to say what they believe and they stimulate divergent and creative thought even when they are wrong. The implications for group decision making, whether in juries or companies, have been considerable and there is increasing interest in research and in practice for the value of authentic dissent in teams and in creating “cultures” of innovation.



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Minority Influence Theory

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Abstract

The study of minority influence began as a reaction to the portrayal of influence as the province of status and numbers and from a realization that minorities need not just be passive recipients of influence but can actively persuade. From these beginnings, a considerable body of research, including ours, has investigated how minority views prevail. . In the decades that followed, we concentrated, not so much on persuasion or attitude change but, rather, on the value of minority views for the stimulation of divergent thinking. Dissent, as has been repeatedly documented, “opens” the mind. People search for information, consider more options and, on balance, make better decisions and are more creative. Dissenters, rather than rogues or obstacles, provide value: They liberate people to say what they believe and they stimulate divergent and creative thought *even when they are wrong*. The implications for group decision making, whether in juries or companies, have been considerable and there is increasing interest in research and in practice for the value of authentic dissent in teams and in creating “cultures” of innovation.

Overview:

My life long interest has been the study of influence --and in particular, influence by those who hold minority opinions. Initially, we concentrated on how minorities “win” or persuade others to their position. Stimulated by observations on juries, we recognized the potential value of dissent, not for the truth that it holds or for its ability to persuade but, rather, for the thought that it stimulates. Repeatedly we found that dissent stimulates thought that is more enquiring, more divergent and more creative. By contrast, majority views stimulate convergent thinking. People focus on the issue from the perspective of the majority and narrow the range of considerations, often convincing themselves of the majority position.

This work has had influence on the dialogue within Social Psychology but also on the law as well as corporate cultures in organizations. Dissent has come to be seen as having value and not simply as an “obstacle”. There is serious consideration of the importance of protecting dissent in juries via procedural rules such as the requirement of unanimity. And, in organizations, the assumptions regarding the value of cohesion and homogeneity have been complicated with a willingness to recognize the importance of diversity and dissent for innovation.

Background:

As a graduate student in the mid '60s, I had the good fortune of studying with Henri Tajfel and, through him, meeting Serge Moscovici (in England and France respectively) and, by virtue of their influence, I recommitted to the reasons why I decided to study Social Psychology. As an undergraduate Math major, it was a single lecture on brainwashing that motivated me to pursue graduate studies in Social Psychology; it was the simple but compelling observation that people are powerful sources of influence. They can educate, inspire and strengthen us or they can diminish and weaken us as human beings. Though graduate school proved to be disappointing with careful, highly choreographed and often single variable studies, it was a "gap" year in Oxford that renewed my interests. Perhaps it took two Eastern European Jews who went through WWII to teach me that we could and should study the combat between ideas and groups, that there were exemplars of courage and cowardice brought about by social conditions and the influence of others.

It was one year after my doctorate when, as a Visiting Professor in Bristol with Henri and in Paris with Serge that was to have the most influence on my thinking and subsequent professional career. Henri was passionate about categorization and the importance of ingroups and outgroups. Serge was rethinking the flow of influence.

Social Psychology at that time portrayed influence as flowing from the strong to the weak. We learned the value of status, confident styles and numbers. High status individuals (or the perception of higher status) influenced those of lower status (Berger, Fisek, Norman, & Zelditch, 1977; Hovland, Janis, & Kelley, 1953). It was the white, tall,

wealthy, attractive male who studied at elitist institutions and/or who had position and title who influenced those of us who had few of those attributes or demographics. People who spoke loudly, quickly and with authority exercised influence (Giles, Bourhis, & Davies, 1979). And we certainly learned about the power of majorities. Faced with a disagreeing majority, even one that was wrong, people abdicated information from their own senses and became subject to doubt (Asch, 1956; Kiesler & Kiesler, 1970). The individual or minority of individuals were passive agents. Their only choice seemed to be one of independence or conformity to the majority view.

The power of these elements was true then and it is true now. However, not being in the categories of status nor numbers in Psychology (who were predominantly male) nor being particularly loud or authoritative, I can remember feeling relatively powerless in the influence world. Much of the research, including that later embodied in social impact theory (Latane, 1981) conveyed the imagery of a large truck that pummeled people into acquiescence. Perhaps Tajfel and Moscovici and the students who were drawn to them in those days identified with being in a minority and thus found appeal in a conception of an active minority view, but it was also the world in which we found ourselves. During that year, Serge and I spent a lot of time discussing minority views and their power. He would often tell me that American Social Psychology did not portray the world he saw. The emphasis on winning friends and influencing people, reciprocating favors and continually resolving conflicts was in contrast to the experiences of his generation. Being 1970, it was also in contrast to both his and my then recent experience. He went through the May '68 uprising which had lasting effects on the university and French society in general.

The year before, as a brand new Assistant Professor at the University of Chicago (1968), I saw in person a vigorous conflict of ideas about the Vietnam War. The anti-war minority did not conform or remain silently independent. They were vocal, persistent and aggressive –and there were violent consequences in response. We witnessed the beatings, the “lessons” taught to faculty who supported those protests but we also saw social change and an evolution of public opinion that was dramatic.

Shortly before, Serge along with Claude Faucheux developed a theory questioning the one-sided conceptualization of influence (Faucheux & Moscovici, 1967; Moscovici & Faucheux, 1972). Recognizing that social change cannot be understood without attention to an initial minority view, they set out to demonstrate that minority views can prevail. As we had all witnessed, individuals and minorities were not simply passive agents who either resisted or conformed to majority judgments; they could in fact exercise influence themselves. Furthermore, behavioral style is important and, in particular, consistency over time is key to exerting influence. Not having the numbers or status to influence at the outset, a member of a minority needed to argue his/her position effectively. It is the orchestration and patterning of verbal and non verbal behaviour that fosters influence (Moscovici & Nemeth, 1974). And in 1969, an experiment was able to demonstrate just such an effect (Moscovici, Lage, & Naffrechoux, 1969). That study and its findings have been replicated numerous times and provide, in my judgment, some of the best insights into why and how minorities can prevail. Thus it is worth describing in some detail.

In that study (which is almost a mirror image of a typical conformity experiment), 4 naïve individuals and 2 confederates were shown a series of blue slides and were asked to judge the color and the brightness of those slides. A control group consisting of only naïve individuals had no problem; they repeatedly called the blue slides “blue”. In the experimental conditions, the 2 confederates offered a differing view. In the “consistent” condition, they repeatedly called the blue slides “green”. In other words, they said “green” on every trial. In the “inconsistent” condition, they called the slides “green” on 2/3 of the trials and called them “blue” on 1/3 of the trials.

Most people –and certainly most students in my courses—hypothesize that the inconsistent condition would exert more influence. After all, they are correct on 1/3 of the trials and, further, they agree with the majority on those trials and are thus likely to be better liked. The findings were the reverse. In keeping with the theory emphasizing the importance of consistency, the findings showed that the consistent minority persuaded the majority to say “green” on nearly 9% of trials whereas the inconsistent minority exerted no influence, not differing statistically from the control group.

Perhaps more importantly, the findings from this study showed that influence was greater at a private or latent level than evident at a public level. After the experimental procedure, individuals were asked to sort a series of blue/green chips into the categories of either “green” or “blue”. If you think of the colored chips you could find in a paint store, you can order the blue/green chips along an actual physical dimension –from “blue” to “green”. You can mix up these chips but, at a point along that physical

dimension, individuals or a control group call those to the “blue end” of that point “blue” and to the “green end” of that point “green”. Experimental subjects in the consistent condition shifted that point. They called the chips “green” when a control group would call them “blue”. These two findings have stood the test of time.

As I reflect back on conversations in those early years, Serge was very clear about the importance of consistency—and the perils of compromise. He had a rather psychoanalytic view of influence. You had to combat the resistances. There was a war of ideas; there was conflict not easily resolved; and above all, there was clarity, even with exaggeration and omission

Serge behaved as he theorized and his lessons to me were personal as well as professional. He *always* put my feet to the fire. Whenever I would lapse in the graduate student habit of citing other people to legitimate my point, he would ask what I really believed followed by “you must write **that**”.

He convinced me that consistency and confidence were imperative. Know what you know and speak what you believe. But in those observations, it also became clear that influence involved “style over time”, that there was an orchestration of the verbal and non verbal ways in which people interacted and persuaded. This stimulated an early study showing that consistency could be maintained without the confrontation of repetition and increasing the conflict, provided that changes in position were due to changes in the stimuli or “facts” (Nemeth, Swedlund, & Kanki, 1974). Above all, we

came to recognize that there was a subtlety about influence, a public face that often masked what people really thought.

Behavioural style:

The early study demonstrating the importance of consistency over time has been repeatedly corroborated and developed (Moscovici & Lage, 1976; Moscovici & Nemeth, 1974; Mugny, 1982; Nemeth, Maysel, Sherman, & Brown, 1990; Nemeth, Swedlund, & Kanki, 1974). For the minority to be “persuasive”, they need to be seen as having a position in which they believe. Minimally this means consistency of the position, not necessarily repetition. Mugny has further pointed to the subtlety of consistency by making the distinction between flexibility and rigidity, the former but not the latter being conducive to persuasion. Additionally, numerous studies have confirmed that minority influence is aided by confident behavioural styles e.g. taking the head seat (Moscovici & Lage, 1976; Nemeth & Wachtler, 1974) or even by a perception of confidence which might occur by virtue of simply persisting as a minority voice (Nemeth, Wachtler, & Endicott, 1977). This area, in my judgment, is both fascinating and worthy of further development though the subtleties involved in the timing and choreography of behavioural style are challenging for researchers.

The private or latent nature of influence:

Perhaps the more important development from that early study is the fact that minority views exercise their influence at a private or latent level rather than in public. Even in our early discussions, it was clear to us that influence was deeper and more profound than

public adoption of a position. People may not publicly agree with the minority position but they may state it privately, later or in a different form (David & Turner, 2001; Mugny, Butera, Sanchez-Mazas, & Perez, 1995; Nemeth & Wachtler, 1974). It may appear on indirect judgments or be generalized to other subjects (Forgas & Williams, 2001; Maass, West, & Cialdini, 1987; Mugny, 1982).

Part of the reason for the “latent” influence by minorities is that people do not want to publicly move to a minority view since they fear the likely ridicule and rejection, consequences that have been documented since the early work by Schachter (1951).

In one of our own studies (Nemeth & Wachtler, 1974), we saw very clearly how adamantly subjects would resist any public movement to a minority position. The setting was a mock jury involving a personal injury case. The case was hypothetical-- but the anger was so evident that subjects were pounding their fists on the table next to the confederate’s face (the one who argued a minority position on compensation). The subjects did not move one cent in public. Yet, their judgments shifted dramatically on post-experiment questionnaires both on the case they had discussed and also on new cases with new facts. It was a demonstration of strong resistance against any public agreement with minority views coupled with change at a latent level. It also made us revise our compensation to include “combat pay” for the confederate.

Mugny and his colleagues have elaborated the reasons for this reluctance to publicly move to the minority view by invoking considerations of social identity and the desire to

belong (Butera & Mugny, 1995; Butera & Mugny, 2001; Mugny et al., 1995). Other considerations have been ingroup and outgroup status. Almost all researchers demonstrate that there is more discomfort and anger (Philips, 2003) when the holder of a minority view is a member of one's ingroup rather than a member of an outgroup. And this discomfort may be one of the reasons why many studies show influence is greater from an ingroup member (Crano, 2000; David & Turner, 1996; Volpato, Maas, Mucchifaina & Vitti, 1990). Discomfort may be a catalyst for further assessment of the message.

Such findings make it clear that it is not easy to maintain a minority viewpoint. Anger and the perceptions of being unintelligent (or worse) are a predictable consequence (Levine, 1989). However, people who persist in a minority view can also be accorded the perceptions of confidence and courage which can be assets in their attempts to influence (Nemeth & Chiles, 1988; Nemeth, Wachtler, & Endicott, 1977). This is still an uncharted area of research—why would anyone maintain a dissenting viewpoint given the consequences—but fortunately, it is starting to be investigated (DeDreu, DeVries, Franssen, & Altmink, 2000; LePine & Van Dyne, 2001).

Moving to Influence as a Stimulant to Thought

Learning that influence may occur at a private or latent level, even if not observable in public helped us to question the paradigms used to study attitude change. The field conceptualized influence to be attitude change on a Likert scale. If the target moved along that scale to the position of the source, that was influence. Yet, we had increasing

evidence that attitudes could change on other dimensions or on other related issues. But convincing researchers to broaden the definition of influence was not easy as it seemed. Yet, we were convinced that influence was far more subtle and deeper than movement on a Likert scale. It was perhaps a recognition of this possibility plus the fact that dissent had its power at the latent level that was to prime me for the observations that would come to dominate my professional life-- and ironically to bring me back to the reasons why I decided to study Social Psychology.

My own early work on minority influence— the first 5 years post PhD-- was consumed with understanding when, how and why minority views can prevail. A number of us who had studied with Moscovici had become a cohesive and determined minority ourselves and had documented and elaborated the power of the minority to persuade—to “win”. And we were finding converts to that field of research, initially with a wave of second generation researchers. However, in 1974, my focus started to shift, much of it owing to an abiding interest in jury deliberations. Jury decisions were often the “task of choice” in my experimental studies but it started to become a research interest in and of itself while at the University of Virginia.

The Supreme Court had recently ruled that a requirement of non-unanimity in jury decisions did not violate the defendant’s constitutional rights (Apodaca, Cooper, & Madden, 1970; Johnson v. Louisiana, 1970). Oregon permitted a 10-2 verdict and Messrs. Apodaca, Cooper and Madden were convicted by 10-2 or 11-1 verdicts. In Louisiana, crimes subject to hard labor were allowed a 9-3 verdict and Mr. Johnson was

convicted by such a vote. All of these individuals thus appealed their convictions based on a violation of the 6th and 14th amendments. Under “equal protection of the law”, for example, their verdicts would have had to be unanimous had they been tried in another state. The Court, however, ruled that their rights had not been violated and essentially argued that the verdicts would have been the same had unanimity been required.

At the time, there was evidence (Kalven & Zeisel, 1966) from real juries that the position held by a majority on the first ballot had a high likelihood (around 90%) chance of being the final verdict. Davis and his colleagues (Davis, 1989; Davis, Tindale, Nagao, Hinsz, & Robertson, 1984) had documented the power of majority views in mock jury decisions; in particular, a 2/3 majority seemed to fit the outcomes quite well. There was little evidence that the verdict differed as a result of a requirement of unanimity. But the issue was larger than that.

In reading the Court’s decision—which, by the way, was rendered by a majority of 5 justices outvoting a minority of 4 justices—it was clear that there were broader considerations, those dealing with the *process* (not just the outcome) of decision making, theories about majority and minority influence and community confidence. For example, the majority Justices had a theory that the majority would not outvote a minority until “reasoned discussion had ceased to have persuasive effect or to serve any other purpose—when a minority, that is, continues to insist upon acquittal without having persuasive reasons in support of its position” (Johnson v. Louisiana, 1970, p1624). The image of “obstacle” and rogue dissenter reared its head again. By contrast, the minority

opinion of 4 Justices had a different theory and worried that polite and academic conversation might occur once the requisite votes were needed and this was “no substitute for the earnest and robust argument necessary to reach unanimity” (Johnson v. Louisiana, 1970, p 1647-8). We decided to study the issue.

We first did an experimental study varying unanimity vs 2/3 majority rule on a first degree murder case. We studied not only outcome (verdict) but also the process of decision making. In that study, we did a full Bales analysis, coding every comment in terms of who spoke, to whom it was addressed and which of the 12 categories (e.g. “agreeing”, “giving information”, “asking for opinions”) it exemplified. We also collected data on the robustness of the deliberation, on whether the minority was outvoted when the requisite number was reached as well as perceptions of justice and agreement with the verdict, all of which were issues in the Court cases.

We then studied the issue in connection with the Law School at the University of Virginia. Third year law students tried various cases in an actual courtroom with an actual judge and with witnesses. We brought the jury. Each jury of 12 was divided into 2 groups of 6, one under a requirement of unanimity, the other a 2/3 majority. Deliberations were videotaped and analyzed as in the experimental study. This way, we hoped for both experimental control and generalisability and fortunately, the findings proved to be in parallel, thus strengthening the findings. We learned that unanimity did not statistically alter the verdict but it did change the process. Under unanimity, deliberations were more

robust, more fact oriented and people believed that justice had been better administered (Nemeth, 1977; 1984). However, we learned a great deal more.

Looking in detail at 40 minute deliberations of 60 or so groups, we started to notice something –call it a hunch or an insight. The groups with argumentation and debate, those where dissent was voiced and maintained, seemed to use more information, consider more options and, in our subjective judgment, had higher quality deliberations. That insight led to our first experimental study (Nemeth, 1976; Nemeth & Wachtler, 1983) where findings showed that subjects exposed to a disagreeing minority detected solutions that otherwise would have gone undetected. The task, a hidden figures array, was searched more fully and subjects saw the figure when embedded. They were not guessing; they were actively searching the array and finding “truth” where it existed. This was in contrast to exposure to a disagreeing majority. In the latter situation, people concentrated on the figures suggested by the majority; they followed them exactly but did not find novel solutions. Such a finding corroborated our “hunch” about the value of minority views and was presented to the first joint meeting of the American and European Societies of Experimental Social Psychology in Paris 1976.

That presentation had considerable impact. The audience seriously considered the possibility that minority views could influence thought and not just movement in attitude—public or private. I even think it influenced Moscovici’s conversion theory (1980) which, while still focusing on attitude change, theorized about the cognitive

reasons for majority influence at the public level and minority influence at the private level. The former, he theorized, was a comparison process. The latter was a conversion process where people actively processed the minority's arguments and position.

That first experimental study, conducted in 1973-4 at Virginia, set the direction for many of our subsequent studies. And the findings provided optimism for raising the quality of thought and decision making. These "rogues" might educate and stimulate us; they might make us smarter and wiser. It also dovetailed with the insights from that first jury study. Perhaps mostly, the jury work taught me where my interests lie. I didn't really care who won, whether it was the majority or the minority. The possibility that we could construct groups that were wiser and smarter than the sum of the individuals was compelling. And it was in stark contrast to the findings that groups are defective, that they make poor decisions (Janis, 1972). At least they did not always have to do so.

After the initial work in Virginia, we conducted more studies, mostly at Berkeley, continually refining our conception of how majorities and minorities stimulate thought. We had information that those exposed to a minority view detected solutions that otherwise would have gone undetected (Nemeth, 1976; Nemeth & Wachtler, 1983). In a problem solving setting, those exposed to a minority utilized multiple strategies for problem solving (and performed better) while those exposed to a majority utilized the majority strategy to the detriment of other strategies (Nemeth & Kwan, 1987). There was also evidence of more originality of thought in response to minorities and more conventionality of thought in response to majorities (Nemeth & Kwan, 1985).

This early work convinced us that majorities and minorities stimulated different kinds of thinking and led to a Psychological Review attempt at a theoretical formulation (Nemeth, 1986). Briefly, we hypothesized that majorities stimulate convergent thinking from the perspective posed by the majority. The thinking goes something like this: People exposed to a majority with a differing view are under stress and thus narrow the range of considerations. Further they assume the majority is correct and are motivated to assume that. As such, they focus on the issue or problem from the perspective of that majority in an attempt to understand why they take the position they do (and to find a reason to move to that position). By contrast, people exposed to a minority with a differing view assume the minority is in error. However, with consistency on the part of the minority, people come to reassess the situation and look at the issue anew. They don't assume the minority is correct but they are motivated to consider the issue more carefully since there must be a reason why the minority takes the position it does and, further, is sufficiently confident to maintain it.

Subsequent studies confirmed this set of hypotheses. We had evidence that minorities stimulated a search for information on all sides of the issue while majorities stimulated a search for information that corroborated the majority view (Nemeth & Rogers, 1996). There was better recall of information across categories in response to minority views (Nemeth, Mayseless, Sherman, & Brown, 1990). We even tested the strength of the theory by predicting when *majorities* might produce better performance. Remember the prediction is that majorities stimulate convergent focused thinking from their perspective.

In one study, we hypothesized that majorities could induce better performance IF it was a task where convergent thinking was useful and the perspective of the majority was appropriate. We chose the Stroop test, one of the few tasks where convergent thinking is useful. People are shown a number of color words which are printed in an ink of a different color (e.g. the word red printed in green ink) and are asked to read the color of ink as quickly and accurately as possible. This is a classic test of interference and is quite difficult as one often says the color word (e.g. red) rather than the color of ink (e.g. green). Here, if you can convergently focus on ink and not the name, this is adaptive. Conversely, if you convergently focus on name and not the ink, that is particularly maladaptive.

The theory predicts that majorities stimulate convergent thinking from their perspective. The findings showed that when the majority focused on color of *ink*, individuals were able to perform better on the Stroop test while a majority focus on *name* color led to reduced performance. When it was a minority, their focus did not matter and performance was in between the two majority conditions (Nemeth, Mosier, & Chiles, 1992). This study was essentially replicated with further evidence that minorities improve flexibility of performance (Peterson & Nemeth, 1996). Such findings gave us additional confidence about the theory since we could shift performance by altering the perspective of the majority and the nature of the task.

Research strategy:

The decision to do very simple problem solving tasks rather than study the value of dissent in interacting groups was a deliberate one. While the origin of the idea was jury decision making and while our intended application was the role and value of dissent in small groups, we were also aware of the fact that interacting groups are very complex. They are difficult to study and it is difficult to establish cause and effect. Moreover, we wanted to make the point that the thinking, the performance and the decisions were not just different; they *were better*; they were correct. Attitudes are difficult to characterize as better –but if you show that people find correct solutions that otherwise would have gone undetected, if you show they take in more information, consider more options and use all available strategies with resulting better performance and more originality—then it becomes easier to argue that groups profit from dissent, from minority views, especially since these effects occur even when those dissenting views are incorrect.

To some extent, this research strategy was also consistent with our theoretical perspective. Serge and I often spoke of the importance of making a clear point and being consistent, not just for personal integrity but also for influence. This was a bit contrary to graduate training where we often complicated ideas, added variables, studied contingencies. However, in reflecting back on my early work on this issue, I had both a preference for simple (hopefully elegant) research designs and fundamentally believed that it is clarity, consistency and even simplicity that stimulates thought. The hope was that others would be stimulated to extend the thinking, to correct it, to elaborate on it and to show its boundary conditions but the guiding theme of the value of dissent for

divergent thought and clarity of position would remain. And we would welcome debate, for I was convinced that thought is stimulated by interaction, by discussion and, yes, even argument.

Impact and Application:

Minority influence and Social Psychology:

A good deal of research developed the nature of cognitive activity in the realm of attitude change. Moscovici's (1980) conversion theory, for example, hypothesized quite different cognitive processes in response to a majority vs a minority source. The former created a comparison process where people identified with the majority and tried to "fit in with their opinions or judgments". Thus they often adopted the majority position—at least publicly-- without scrutiny of the message. The latter created a conversion process—assuming the minority was consistent and confident-- whereby people scrutinized the message. They wanted "to see what the minority saw, to understand what it understood" (Moscovici, 1980, p215). This change, when it occurred, was deeper and longer lasting.

Competing theories arose (Mackie, 1987) which recognized that majorities also induced cognitive activity though, again, it was addressed to processing of the message and attitude change. A natural progression was then to integrate the majority/minority source issue to the well established research on peripheral vs central (Petty & Caccioppo,

1981) or systematic vs heuristic (Chaiken, 1980) information processing and attitude change. As a result, we now know much more now about such processing and resulting attitude change (see generally, Hewstone & Martin, 2008; Wood, Lundgren, Ouellette, Busceme, & Blackstone, 1994).

What has occasionally concerned me (Nemeth, 2003), however, is that my own work has sometimes been misunderstood and assumed to predict attitude change—and thus included in the dialogue on message processing. Often, cognitive activity is construed as analyzing the message of the source while my theory and work deals not so much with processing information as with thinking. Importantly, majorities stimulate people to think about the issue from their perspective. People adopt their framework, utilize their strategies and convince themselves of the truth of that position and way of thinking. Minorities do not just induce thought about their message; they induce thought about the issue. And importantly, they induce thought that is divergent, that considers multiple options only one of which is that suggested by the minority. People open their minds to information, to options, to creative possibilities.

This central idea was developed by a number of creative Italian researchers (Volpato, Maass, Mucchi-Faina, & Vitti, 1990) who demonstrated more original proposals as a result of exposure to minority views and extended the formulation by introducing the ingroup/outgroup nature of this influence. This is a direction further developed by Mugny and his colleagues in their cognitive elaboration model (Mugny & Perez, 1991; Mugny &

Papastamou, 1980; Mugny et al., 1995) and, more recently by DeDreu and DeVries (1997) and Philips (2003).

When researchers have tried to integrate this theory into attitude change, it is a bit difficult because our hypothesis regarding divergent thinking doesn't predict what attitude will be adopted. It does suggest, however, that whatever attitude that is, it will be better conceived, better understood and probably closer to reality. If you use an intervening variable such as the content and/or direction of thought, you can probably predict attitude change. But long ago--back at the beginning--"winning" was not the main focus.

Apart from attitude change, there have also been some interesting recent developments related to the minority person's *own* cognitive activity. For example, Levine and Russo (1995) show more divergent thought in preparation for being in a minority position. Others have connected the work to power. For example, there is evidence that those in power focus on a single target while those who are relatively powerless consider multiple sources of information (see Guinote, 2008). These studies have some interesting implications for the cognitive activity of the source and are consistent with hypotheses about differential cognitive activity associated with majority/minority status.

Somewhat ironically, those who have perhaps best understood and utilized our model have been in applied areas. Van dyne and Saavedra (1996), for example, studied the role of dissent in work groups, finding that groups had improved decision quality when

exposed to a minority perspective. They have recently replicated that finding and broadened the work to include value orientations of individualism/collectivism (Ng & Van Dyne, 2001; Goncalo & Staw, 2006). In a study of seven “Fortune 500” top management teams, Peterson, Owens, Tetlock, Fan, and Martorana (1998) find evidence that the most successful teams encouraged dissent in private meetings. And, in a study of US hospitals, Dooley and Fryxell (1999) found dissent related to high quality decision making teams.

Perhaps the greatest impact is evident in the applied areas of law and organizational culture. Both areas have a fundamental interest in the quality of decision making and creativity and these practical concerns have spurred an interest in possible mechanisms for achieving that. Dissent has been captured as one such vehicle (De Dreu & De Vries, 1997; Devine, Clayton, & Dunford, 2001; Ford, Ford, & D’Amelio, 2008; Van Swol & Seinfeld, 2006).

Juries and Justice:

In a study of the quality of the Supreme Court’s own decisions, Gruenfeld (1995) found that the Court’s decisions were more integratively complex when there was dissent. In other words, there were more distinctions and integration of varying considerations when there was dissent. Another direct application is in the dialogue on procedural rules protecting dissent such as the requirement of unanimity in juries (Devine et al., 2001). And we were pleased to find the work cited in Court cases such as an amicus curiae brief in support of considering race and gender in university admissions (*Grutter v Bollinger et*

al and James et al, 2001, Nos. 01-1447) where the authors argue for the value of heterogeneity of views. Some of this application, we believe, has come less from published articles than direct persuasion of lawyers and judges-- a deliberate strategy on our part.

In the mid 70s, partly as a consequence of the experimental work on the unanimity issue, there arose an opportunity to study Psychology and Law for a year at the Battelle Seattle Research Center, courtesy of Gordon Bermant. It was a time to actually learn about the law. We (Bermant, Vidmar, & Nemeth, 1976) organized a conference and, more importantly, one participant—a judge from Portland, Oregon-- agreed to host me for 2 weeks to study the jury system in Portland. Access to judges, prosecutors, public defenders, almost all files, “behind closed doors” negotiations and dinner parties that were conducted like seminars, provided invaluable information about how things “worked” and what issues were legally relevant. It also led to an invited address before the Oregon Bar Assn. in 1976. The topic for the 1100 lawyers was, in part, the importance of unanimity for protection of dissenting views.

Some years later (2003), a similar talk before a group of researchers and judges from Australia and New Zealand led to discussion about the value of dissent as, at that time, both countries were considering “reform” from unanimity to some form of majority rule in juries. While the promoters of this reform used the words “rogue” and “obstacle” to describe the dissenter, our presentation moved the discussion from efficiency to truth, justice and the possible value of dissent.

Corporate Cultures and Voice:

The application of the dissent research to organizations has a similar trajectory but a broader one. There is now considerable evidence that the model of minority influence (Nemeth, 1986) is robust and well replicated in field settings (Peterson, Owens, Tetlock, Fan, & Martorana, 1998; Van Dyne & Saavadra, 1996). Further, a number of studies demonstrate that dissent increases creativity and better performance, at least under certain circumstances (De Dreu & De Vries, 1997; DeDreu, DeVries, Franssen, & Al tink, 2000; Ng & Van Dyne, 2001; Van Swol & Seinfeld, 2006). There are also three specific areas where the work has found application in organizations: the devils advocate, brainstorming and corporate cultures.

a. The devil's advocate:

I had always found it of interest that, even when people believed that dissent had value, they still were trying to quash it or to find a mechanism that could have it “both ways”: keep its beneficial properties and yet be more palatable. Many observers, practitioners and researchers have struggled with the implications of dissent, primarily because they fear the frustration, lowered morale and “slowing down” of the process. They thus often favor mechanisms such as devil's advocate, hoping they can avoid some of the “downsides” of dissent.

Some research has found the technique to be of value though a number of studies compare it to having no alternatives presented (Katzenstein, 1996). Janis (1972) himself suggested devil's advocate as an antidote to "groupthink" (Janis, 1972) on the assumption that it would question the prevailing mode of thought and bring diverse viewpoints to the discussion. After years of working with dissent and thought stimulation, however, we never believed that you could clone the effects that easily. Serious reappraisal of a belief, we thought, required challenge and would be unlikely to occur in a role playing setting. It was at least worth studying.

In one study (Nemeth, Connell, Rogers, & Brown, 2001), we compared authentic dissent with devil's advocate in a mock jury decision making experiment. Groups of 4 deliberated a personal injury case and decided on appropriate compensation by means of a series of votes and arguments. The position and arguments of the "minority" remained the same. The only difference was whether or not the person was asked to play the "devil's advocate" prior to the deliberation. Results showed that "authentic dissent" (when no such instruction was given) led to more divergent thinking. The subjects generated novel thoughts that were on both sides of the issue. When that person was asked to play a "devil's advocate", there not only was less thinking on both sides of the issue. There was evidence of "cognitive bolstering". Individuals generated thoughts that confirmed their initial position. Thus, we were able to show that not only was devil's advocate not as effective as authentic dissent but, further, it solidified the initial position.

In a second study (Nemeth, Brown, & Rogers, 2001), we compared variations of devil's advocate. In the first study, the true position of the "devil's advocate" was unknown. In the second study, we simply varied whether it was unknown or known and, if known, if it was consistent with the position she advocated or inconsistent with the position she advocated (namely she agreed with the majority). A fourth condition was "authentic dissent", namely no request to act as a devil's advocate. Surprisingly, the variations of devil's advocate did not matter; they did not differ significantly from one another. However, as predicted, none achieved the stimulating effect of authentic dissent. In this study, that stimulation took the form of creative solutions to the problem under discussion. Those exposed to authentic dissent generated more creative solutions than did those in any of the devil's advocate conditions. These findings have been replicated by Schultz-Hardt, Jochims, & Frey (2002) demonstrating the value of majority/minority viewpoints in the context of information seeking bias.

This issue of devil's advocate remains controversial as many companies and many researchers still argue for its value. Some well known CEOs have raised doubts about devil's advocate, not because it is ineffective but, rather, for the conflict that it creates. Dave Kelley of IDEO, perhaps the best known design company in the world and known for its creative culture, argues that devil's advocates are "naysayers" who can smother a fragile idea. He thus prefers using various non confrontational role-playing techniques (Kelley & Littman, 2005). Others, such as HBS professor, Dorothy Leonard, take our perspective, arguing for authentic dissent (Leonard & Swap, 1999). What becomes

important is that there is a dialogue and debate, one we believe is served by clear alternatives and dissenting viewpoints.

b. Brainstorming:

A technique long believed to enhance group creativity is that of brainstorming. This technique (Osborne, 1957), has persisted in practice even though the research shows little evidence of effectiveness. More precisely, brainstorming instructions increase the number of ideas in a group but it is usually less than the total number of ideas generated by the same number of individuals brainstorming alone (Brown & Paulus, 1996).

The instructions for brainstorming are fairly precise:

1. Quantity: come up with as many ideas as you can
2. Do not criticize others' ideas
3. Build on others' ideas
4. Freewheeling is welcome

The fact that brainstorming instructions do not achieve the level of a “nominal” group (the sum of ideas made by the same number of individuals brainstorming alone) has led many researchers to focus on the “losses” generated by groups. The culprits are usually motivational or coordination problems. In particular, Diehl and Stroebe (1987) review the available literature and conclude that one of the biggest problems is production blocking. People can't speak at the same time and, thus, ideas are often lost or not stated as a result. A good deal of work has focused on how to counter these losses ---for example, having

individuals write down their ideas and then discuss them as a group, using electronic brainstorming, etc. (Brown & Paulus, 1996) .

Most of the work assumes that groups are less than the sum of their individuals and the aim is to counter those losses. The work on dissent and cognitive stimulation, however, suggests that groups can be better than the sum of the individuals, an orientation compatible with the extensive work done by Paulus and his colleagues (Dugosh, Paulus, Roland, & Yang, 2000; Paulus & Dzindolet, 1993; Paulus & Nijstad, 2003) who recognize that there can be a group synergy, that individuals can stimulate ideas in another. This has spawned research on the usage of computer interaction, facilitators, diversity and group goals, all of which figure in this potential synergy. The one thing that is missing is debate.

Note that, among the 4 “rules” of brainstorming, there is the admonition not to criticize each others’ ideas. The idea, of course, is that criticism will cause evaluation apprehension; people will be reluctant to express creative ideas; they won’t “free wheel” for fear of evaluation and risk. The dissent model, by contrast, predicts not only cognitive activity but also originality as a result of exposure to opposing views. This is a bit subtle in the brainstorming context, however, as this is not a setting where the goal is to come up with as many ideas as one can. However, the role of debate and conflict might still be productive.

In a test of this possibility, we conducted a study in both the US and in France (Nemeth, Personnaz, Personnaz, & Goncalo, 2004). The studies were identical. Individuals were given 4 instructions. In one condition, it was the 4 rules as posited by Osborne. In the second condition, there was one exception. The admonition “not to criticize” was replaced by “feel free to debate, even criticize”. Most researchers would have predicted that the “do not criticize” instruction would lead to more ideas than a control group and that the “debate/criticize” instruction would lead to fewer ideas than a control. In fact, we found the debate instruction led to significantly more ideas than a control---and it was even superior to the “do not criticize” (though not significantly so). These findings were reflected in both the US and France.

c. Corporate cultures:

Given the interests of Business Schools on the topic of innovation, the work on dissent was a natural fit. While some learned of the formulation (Nemeth, 1986) in a psychological journal, it was an article directly pertaining to corporate cultures that had the greatest impact (Nemeth, 1977). This article was a direct consequence of an invited address at a conference on Knowledge and the Firm at the Haas School and, much like the legal research, this article required a year to learn about company practices. We came to the conclusion that most organizations try to create cohesion, harmony and alignment with a company vision. They want creativity and innovation but do not embrace the idea of welcoming dissent. In fact, they reward loyalty rather than innovation. And there are

many business gurus who are happy to help them achieve the benefits of a “cult like” culture (Collins & Porras, 1994).

Given the years of documenting the value of differing views, the potential “downsides” of morale and cohesion were evident. After all, we and others repeatedly found that majority views stimulate convergent thinking from their perspective. This is useful provided that the majority perspective was the correct or best one. Thus company practices such as recruiting those who “fit” the organization, socializing and interaction, ejecting dissent “as a virus” –all of which are argued to characterize “visionary” companies (Collins & Porras, 1994) —seemed relevant for identification, for a sense of belonging and morale but not necessarily for performance and certainly not for innovation. Cults use similar practices (O’Reilly & Chatman, 1996).

From our perspective, the problem seemed to be that such convergence of thought and action is useful to the extent that they are on the *right* page, not just the *same* page. Remember the Stroop study (Nemeth et al., 1992). The kinds of thoughts stimulated by such practices, we argued, are powerful for implementation of an idea and depend on the value of that idea but they are not conducive to developing or changing an idea-- to recognizing a changing market or new opportunities. Rather, it is dissent or at least the open airing of competing views that could do this (Nemeth, 1997).

This article, peppered with examples of corporate cultures, was a counter to much of the work arguing for a “cult like” culture which, ironically, was often seen as compatible

with innovation. As such, this work on the value of dissent (Nemeth, 1997) has become part of the dialogue on the role of dissent, debate, “voice”, and conflict in organizations (Amason, 1996; Ford, Ford, & D’Amelio, 2008; Van Dyne, Ang, & Botero, 2003). While it would be comforting to think that people are learning to “welcome” dissent, I suspect that it is more often a stimulant for discussion than taken at face value. The message is still difficult for managers who often want to control when and where innovation occurs. And the recurrent themes of chaos, wasted time and reduced morale still remain.

The issues involved in corporate cultures are complex and varied, ones I knew would require further education, somewhat similar to that required for the work on the law. That led to a decision to spend another year to immerse myself in the issues. I took an unpaid leave of absence in 2005-6 to teach at the London Business School—another humbling experience of learning. But being a part of the voices for the value of diversity and dissent (Van Dyne, Jehn, and Cummings, 2002; Morrison, Milliken, Dyne, Ang, Botero, and Bowen, 2003; Detert and Edmondson, 2008) is an opportunity for impact on social issues. It is also an opportunity for complicating my own research, a result whenever one tries to study applied issues.

It is difficult to balance performance, profitability and innovation. It is difficult to manage creative individuals and the creative process. But it is also difficult to persuade people to speak up and to manage an “unwanted truth” (Edmondson & Munchus, 2007; Morrison & Milliken, 2000). The problems remain: people fear that speaking up will not

serve any purpose save their own branding as a “nuisance”. No one finds it easy to “welcome” disagreement.

Some final thoughts:

Over the course of these decades studying influence in the laboratory and, more recently, in naturalistic settings, I am convinced of a few things. People are loath to change their minds easily, the attitude change literature notwithstanding. Serge was right. It requires exposure to a differing view, not just in content but in contrast, discussion and debate.

I am also happily convinced that authenticity is important. Most of our work documents the value of authentic dissent. Dissenting for the sake of dissenting is not useful. It is also not useful if it is “pretend dissent”—for example, if role played. It is not useful if motivated by considerations other than searching for the truth or the best solutions. But when it is authentic, it stimulates thought; it clarifies and it emboldens.

Finally, it is clear to me that it is still difficult to convince people of the value of diversity and dissent. They accept the principle on the surface; it sounds nice, democratic and tolerant. But in fact, people get quickly irritated by a dissenting view that persists and they fear the lowered morale, the lack of “harmony” and a loss of control by

“welcoming” dissent. Thus, we continually find attempts to denigrate it or to contain it. People are encouraged to “role play” their ideas instead of stating them clearly; they are asked to “fit in”, to be on the same page, to not make waves and to be in line with the leader’s views or the company vision. They are made to fear repercussions, including being marginalized by gossip or ridicule. I often think that it is our differences that make us interesting as human beings and it is in our differences and our willingness to embrace them that we learn and grow, that at least we *think*.

What I hope is that we start to recognize the courage of minority voices and the value of the open airing of competing views (John Stuart Mill ,1859) and that we achieve some clear understanding of the role of trust that allows the passionate interchange to occur. What I also hope is that we less emphasize “winning”, persuading and manipulating others and return to the ways in which interaction clarifies, educates and elevates us.

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