SOCIAL RELATIONS, SOCIAL INFLUENCE AND THE DEVELOPMENT OF KNOWLEDGE

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Abstract: The notion of socialization in developmental psychology is one not often associated with the work of Piaget. Yet in spite of an undoubted emphasis on the mechanisms of epistemic construction, there are important sections of Piaget's work (notably Piaget 1932; 1964) where he elaborates a role for social processes in cognitive development. This paper explores the significance of Piaget's distinction between relations of constraint and cooperation. It examines how authority influence provides a connection between the individual child's development and the social-organizational structures within society which might obstruct the child's involvement in the social construction of knowledge. A corollary focus upon representations and knowledge in social psychology illustrates points of convergence between developmental and social psychological approaches to cognitive change.

INTRODUCTION: DEVELOPMENT IN A SOCIAL CONTEXT

As a theory of 'socialization', Piaget's (1972) genetic epistemology has sometimes been regarded as lacking a fully *social* dimension. Indeed, much of Piaget's work focused on the particularities and technicalities of the child's construction of physical, logical or material knowledge of the world (e.g. Piaget, 1926; 1946; 1966), and relatively little upon the ways in which social knowledge is constructed. There is, however, at least a little room for a social psychological perspective in Piaget's work. This room is created, in part, by Piaget's neglect in fully elaborating a role for the social in development and, in another part, by Piaget's focus upon questions of knowledge and its genesis.

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However, it is certainly true to say that 'the social' is an unstable element in Piaget's work (Duveen, 1997). Piaget's focus upon the development of cognition - the construction of knowledge - transcends any distinction between the beliefs held on a social level and by the individual (Smith, 1993). The principal concern of Piaget's theoretical work was the construction of knowledge, regardless of the plane of human thought on which it occurred. So, for example, the construction of scientific knowledge on a social level (Piaget & Garcia, 1983) involves similar (if not identical) mechanisms to the individual child's construction of knowledge.

Piaget saw the child, like us all, as psychologically involved in a dynamic system of understanding wherein what counts as knowledge can change and change again through an ongoing process of construction. However, psychological development implies a very specific type of change. Development is, in a very real sense, cognitive change which cannot be undone. It cannot be undone because it requires a recognition of the legitimacy of one (set of) belief(s) over another which cannot be "unrecognized".

Whilst the focus of Piaget's and Moscovici's work is in may ways very different, Piaget's view of the constructive nature of knowledge seems redolent of processes described by Moscovici in the creation and propagation of social representations. This common interest focuses, in its different ways, upon the genesis of thought. Piaget's genetic epistemology emphasizes the child's construction of knowledge, whilst Moscovici's "genetic social psychology" focuses upon the construction of social knowledge. Indeed, Moscovici has himself suggested that social and developmental psychology are concerned with a common topic - "the former in space and the latter in time" (Moscovici, 1990, p.169).

Of course, whilst Piaget and Moscovici share a concern with processes of construction, there are many differences between the two. For a start, Piaget's epistemological project led to an empirical focus upon the development of cognitive processes in the individual child. Moscovici's work has emphasized instead the importance of considering how social processes intervene upon and sustain cognitive structures. Although the emphasis of the two theorists is clearly different there is considerable scope for exploring how elements of Piaget's work can help to build a better understanding of the child's development of social representations.

From a perspective of social representations, children come into a society which already possesses structured systems of belief and knowledge. These social representations, which pre-exist the birth of the child, form a context in which a child's thinking will develop. Now, of course, although these representations exist as social realities they are not static and unchangeable entities. They are the products of an autonomous 'thinking society' (Moscovici, 1981); a society in which representations of social life are the products of processes of construction, communication and transformation. Involvement in these processes is therefore fundamentally important. And becoming an autonomous participant in the construction of representations on a social level becomes a crucial developmental concern (Duveen & Lloyd, 1990; Lloyd & Duveen, 1992; Duveen, 1994). From a developmental perspective, the methods for construction of knowledge are, therefore, as crucial as the content of our representations.

SOCIAL RELATIONS

SOCIAL RELATIONS AND DEVELOPMENT

Piaget's work on social aspects of development - *The moral judgment of the child (1932)* and *Etudes sociologique (1964)* - constitutes the beginnings of an account of the role of social processes in psychological development. Here, Piaget suggests that social relations occupy a pivotal role in the developmental process. Social relations not only provide a basis for understanding about the social world or regulations and moral duties. They also provide different routes or methods for constructing (or not constructing) knowledge and for holding our beliefs to be legitimate. These social relations can be categorically and theoretically distinguished into two types - relations of constraint and relations of cooperation - which each entail very different consequences for the development of a child's thought.

Relations of constraint, on the one hand, are characterized by an inequality or asymmetry in the balance of authority attributes between individuals. Importantly, the asymmetry is not an inequality in terms of what different individuals *know*; Piaget's programme of investigating the question, "How is knowledge created?" (c.f. Inhelder, 1992), would never tolerate such a presumption. Rather it is, very specifically, an asymmetry in the power or status of individuals which gives one the opportunity to impose or exercise power over the other. In relations of constraint the child cannot question the legitimacy of an authority figure's judgments. Hence psychological development is hindered since the child is unable to engage in the mutual construction of knowledge.

Relations of cooperation, in contrast, are characterized by an equality or symmetry in relations. In the absence of an authority figure, peers are free to discuss, debate and exchange differing perspectives. The great difference with relations of cooperation is that no one perspective dominates the discussion. The absence of an authority figure allows the possibility (and only the possibility) of different perspectives to be shared, integrated and accommodated into a more adequate, mutual understanding. Relations of cooperation thus permit development, since knowledge can be mutually constructed.

Typically, adult-child relations characterize relations of constraint since the adult possesses many authority attributes - age, size, physical power - over and above the child. The relative authority of the adult and adults' ability to impose punishments leads to asymmetries in the social relation between adult and child. Crucially these asymmetries are not, in any simple sense, asymmetries between the ‘knowledge’ that the adult and child possess. Rather, they are asymmetries in the attributes of power or authority each individual possesses in the social relation (Leman & Duveen, 1999).

In contrast, relations of cooperation are typically found amongst peers, where there is a balance of authority or power attributes in the relation. However, although adult-child and peer relations typify the different sorts of social relation, the crucial theoretical point is the balance of authority that exists between individuals. So it is perfectly possible for asymmetries (and relations of constraint) to exist between children of the same age, and it is equally possible for adult-child interaction to be conducted on a relatively symmetric and authority-free basis.

THE COMPLEXITIES OF SOCIAL RELATIONS

From a developmental perspective, relations of cooperation appear, at first glance, to be the more interesting and important form of social relation. Relations of cooperation permit the exchange of perspectives which is only possible when the social perspective of an authority figure is not able to impose a particular point of view upon the child's judgment. A mutual understanding or knowledge can then be constructed through the integration of different perspectives into a more adequate conceptual whole.

However, another approach to understanding the processes of development might be to explore the obstacles to this process; the reasons why not all social encounters result in a resolution of differences. Of course, these obstacles are the sources of authority which give rise to relations of constraint. But, perhaps, Piaget tells us too little about the nature of authority, the reasons for its power, and the social structures which sustain it.

Whilst, throughout his work, Piaget focuses considerable theoretical attention on how the developmental subject is motivated to seek and attain knowledge (e.g. Piaget, 1977), it might appear that Piaget offers a distinction between constraint and cooperation without elaborating the reasons why constraint operates with such force. One reason for Piaget's omission here might well be that a straightforward acceptance of a good deal of Durkheim's (1925/1961) account of the child's moral development2. Durkheim argued that society was the source of all moral rules. A respect for the authority of society - for the bonds between individuals within a society - was what children needed to learn in order to gain a sense of moral obligation and duty. Durkheim's sociological analysis explored the reasons behind this respect for society, and the structures of authority in society which could instill it.

Piaget argues that Durkheim's account amounts to the description of a morality of constraint. The unilateral respect for authority required for Durkheim's model underpins many aspects of the (egocentric) child's social encounters with adults. This, claims Piaget, is *heteronomous* thought - the product of relations of constraint. But Piaget saw another type of social relation, and another type of reasoning about moral rules. Thus, alongside relations of constraint relations of cooperation indicate a freer, more *autonomous* mode of thinking. Cooperative relations represent, for Piaget, a route to more advanced forms of thought since thought is not constrained by authority.

CHILDREN'S COMMUNICATION OF KNOWLEDGE

Following Piaget, several strands of developmental research have sought to explore the relationship between social interaction and cognitive development. One, in particular, has focused upon the social interactions of the child and the ways in which children address and resolve differences between their perspectives. The Genevan studies of Doise, Mugny and their colleagues (e.g. Doise & Mugny, 1984) have indicated that conflicts generated through a clash of different perspectives motivates discussion between children and makes the differences in perspective salient and psychologically active for the child. The reconciliation of those different perspectives involves the construction of a shared, social representation3. This mutually constructed understanding is in many ways the

2 The significance of Durkheim's work for Piaget's theory is often forgotten in contemporary accounts of moral development (e.g. Turiel, 1983).

3 In this context 'social representation' is not, I believe, Doise and Mugny's term.

creation of an object of thought - an 'objectification' which is exclusively achieved through social interaction. Doise and Mugny's studies share with Piaget's theoretical work a focus on the *benefits* of interaction - on the constructive consequences of a child's involvement in social activities with peers.

Since interaction and communication have been signaled as precursors to development, a further empirical approach could be to focus upon the nature of children's communication itself and in particular upon the features of social relations which shape children's conceptions of knowledge. Two studies (Leman & Duveen, 1996; 1999) have focused on exploring the ways in which aspects of a child's social identity might intervene to influence the communication and the perception of knowledge amongst children.

A first study, Leman & Duveen (1996) used a simple perceptual task to generate a discussion between same-aged peers. Children from two age groups (6-7 and 11-12 years) were asked to judge whether two lines in an optical illusion were the same length. Some children received training in a measurement algorithm using sticks placed over the lines. Others had no such training. The aim of this training was to give some children a form of "expert knowledge" on the task - and to see how they deployed that expertise in conversation. Discussion pairs consisted of one child who thought the lines were the same length, and one who thought they were different. The children were asked to discuss it and arrive at a decision together.

The results from this study showed marked differences between the age groups in, (a) the perception of what counted as knowledge, and (b) the ways in which that knowledge was used strategically in the ensuing discussion. Older children tended to grasp the strategy of an argument well, deployed their expert knowledge (where they had it) appropriately, and seemed to be more motivated to achieve "the right answer". These older children seemed to believe there was a right answer that could be discovered through an exploration of the reasons behind each child's belief.

In stark contrast, the younger children had a poor grasp of the strategy of an argument. Conversations centred less upon the reasons behind beliefs and more upon the personalities or the strength of belief of each child. Moreover, the younger children's conversations were overtly conflictual and, more interestingly, this conflict centred along gender lines. Specifically, younger children had difficulty difficulty separating their notions of gender from the arguments which their conversation partners sought to justify.

OBSTACLES TO DEVELOPMENT

A second study (Leman & Duveen, 1999) sought to explore these observed gender effects more systematically. A single age-group of children (9-10 years) were presented with a modified version of one of Piaget's moral vignettes (Piaget, 1932, p.118), and asked to decide which of two protagonists in a pair of stories was naughtier. The conversations of children in this age group were a focus of empirical interest since between 9 and 10 years children's reasoning (on this moral task) tends to be intermediate between heteronomous and autonomous forms of thought. Thus at this developmentally 'sensitive' phase in a child's life (at a period where reasoning is in transition) it should be possible to observe the effects of different forms of influence in social relations in the sharpest relief.

Once again, children who had given different answers independently were placed in a conversation pair and asked to agree a response. However, in this second study pairs were formed which were either same sex (all-male or all-female) or mixed sex (a boy and a girl). The mixed pairs were further divided into two groups. Firstly, there were girls who had given an autonomous response independently paired with boys who had given a heteronomous response. Secondly, there were pairs consisting of boys who had given an autonomous response, and girls who had given a heteronomous response4. Thus there were four pair types - each providing a contrasting combination of forms of reasoning about the moral vignettes, and different balances or combinations of genders of the participants in the subsequent discussion.

A first result was that in the majority of cases, children benefited from interaction and discussion about the issue. In other words, the majority of heteronomous respondents tended to accept the arguments (or the position) of their autonomous conversation partners - the more 'advanced' form of reasoning therefore tended to triumph. This was true regardless of the gender-mix of the pair. However, there *were* great differences in how that agreement was achieved in the different pair types.

Same sex pairs tended to reach agreement in about 42 seconds - relatively quickly. But in pairs where a girl tried to convince her male partner of the legitimacy of her autonomous arguments, agreement was far more difficult to achieve. In fact, in these pairs (where the girls persuaded the boys) agreement took 89 seconds. The boys' resistance to the girls' arguments led to a greater conflict in the conversation, but also to a greater (or more lengthy) analysis of the reasons behind each child's belief. In the final pairing, where the "autonomous" boy attempted to persuade the "heteronomous" girl a further pattern was visible in conversation. Here agreement was reached very quickly (30 seconds), and there was less conflict and less elaboration of the relevant arguments than in any other pair.

Once again, in conversation, gender seemed to be acting as an obstacle or constraint upon the effective communication of knowledge. Indeed, there was some confusion between notions of gender and notions of "the right answer" which had been evident from the conversations and decisions of the 6-7 year olds in the first study. And although these intermediate children had ultimately been able to resolve this confusion, gender was clearly an important influence upon both the style and the outcome of their discussions.

Taking the two studies together it is clear that amongst younger more heteronomous reasoners knowledge, judgment and (in terms of the style and strategy of conversations) the method for achieving knowledge seems inexorably tied to a peer's gender group membership. In our optical illusion task this connection disappears amongst the older children. (Of course, that is not to say that a similar connection between gender roles and knowledge does not remain in other forms amongst these older children or, indeed, within our 'adult' social representations. Perhaps what distinguishes the younger children's notions of knowledge *here* is their resistance to persuasion, even after a focused conversation with a peer who disagreed). Moreover, overcoming this confusion

4 Although these children give autonomous and heteronomous responses, it does not detract from the generally intermediate character of these children's thought. Autonomy and heteronomy do not describe the whole of a child's thought at any one time (Leman & Duveen, 1996). Children at this age of developmental transition probably have some degree of conceptual access to both heteronomous and autonomous forms of reasoning.

between gender and knowledge clearly presents the intermediate children with a problem or, if you like, a conflict.

SOCIAL INFLUENCE

SOCIAL SOURCES OF AUTHORITY INFLUENCE

How are we to understand the influence of gender upon these children's conversations? One way to understand the nature of this influence might be to return to Piaget's distinction between relations of constraint and cooperation. Relations of constraint possess a power to influence children's judgments by virtue of the authority, power or status in social relations. Whilst typically this authority is a consequence of adults' status over the child5, it is the possession of authority rather than adult status *per se* which is the effective and persuasive factor in interaction. This authority comes from the structures, hierarchies or status within and between social groups which exist within a society. And the power of authority to influence our judgments stems from social organizational or *social status* aspects within a social group or wider society.

The influence of gender in the conversations of the children (Leman & Duveen, 1996; 1999) reflects a similar process by which social structures intervene upon the judgments of individuals. In this sense an individual's gender group membership, for the younger and intermediate children at least, creates a social *status authority* which presents a powerful influence upon both interaction and judgment. It possesses a power to influence their thinking precisely because these children's notions of gender are grounded in rather rigid conceptions (Lloyd & Duveen, 1992) of the social roles, attributes and expectations associated with different gender groups. It is sustained by these social attributes of gender and, by extension, by structures which exist within everyday social life. Status authority, a feature of relations of constraint, influenced the younger children's judgments and possesses the ability to obstruct the communication of knowledge and exchange of perspectives in conversation between the intermediate children.

Status authority possessed a power to influence the thought of younger children and to obstruct the judgments of intermediate children. But amongst the older children in our first study, and the intermediate children in the second, status did not ultimately triumph in conversation and judgment. Rather, something else seemed to effect an influence. That influence focused upon the older children's motivation to attain the "right answer". And this right answer - the characterization of knowledge - was something aside from the immediate structural features of the social relation from within which a judgment was made.

So from within cooperative relations another type of influence is having its own effect. It is an influence which we might label an *epistemic authority* since it, like status authority, possesses a power to influence judgment. Epistemic authority is the influence of knowledge - of knowledge which is autonomous and unrelated to the social organizational and status features of social relations.

5 Authority attributes might take many forms; the physical size or power of adults, the ability of adults to impose punishments or the perception of adults' greater knowledge over and above the child.

Status and epistemic authority constitute contrasting influences upon thought in conversation and interaction. The two sources of influence are in a dynamic relationship. Whilst status influence stems from the structural aspects of social relations, epistemic influence represents a basis for judgment which is either independent of those structural aspects or has overcome those structural aspects through a renegotiation of the structure of the relation itself.

Amongst the younger children, the status in the relation is inescapable: these children's notions of identity and their identification of knowledge with gender (status) compromised the effective communication of their expertise. But with the older children more epistemic influences permit a focus upon a 'correctness' in judgment which is unrelated to any status which might exist in the relation itself. With the intermediate children, status and epistemic authority conflict in interaction. Overcoming this conflict (when the girls persuaded the boys) takes time. Combining status and epistemic authority constitutes a more powerful influence with more immediate effects (when the boys persuaded the girls)6. Epistemic authority alone (same sex pairs - i.e. no status in the relation) can affect an influence relatively unimpeded by structural aspects of the social relation.

Compared with epistemic authority, structures of status authority can be readily observed in our everyday social interactions; in formal and informal hierarchies and within and between social groups. However, as our studies have shown, the influences of both can be detected in interaction. Epistemic authority, the influence of knowledge, remains a rather more mysterious concept precisely because it has a profoundly *constructive* nature. Its influence, to those (like our younger children) who have not yet grasped it, is a mysterious power. And since, as adults, our knowledge is by no means "perfect" or necessary (c.f. Smith, 1993) what constitutes an epistemic authority to us remains somewhat mysterious until its legitimacy is recognized.

SOCIAL INFLUENCE AND THE BASIS OF BELIEF

Epistemic and status forms of authority provide contrasting routes to the construction of beliefs and knowledge. Of course, when social structures of status, legitimize an individual's judgment (as was the case with the younger children in our study), these social structures amount to 'knowledge' for that individual. Only once epistemic sources of influence can be separated out from status sources of influence can the legitimacy of the former be fully appreciated. This separation requires a recognition of the autonomy of knowledge - an independence from structures of status in society which might sustain other forms of belief. This recognition of the alternative forms of legitimacy in beliefs requires an autonomy of thought and it is therefore, in Piagetian terms, a developmental advance.

Of course, although the separation of epistemic from status sources of influence and legitimization may constitute a developmental advance, it is not a distinction which becomes self-evident in all *adult* interaction and thinking. Indeed, since the social relation

6 Perhaps in this case, when epistemic and status influences are combined, children or not obliged to form a distinction between the two forms of influence and conceptions of knowledge. To return, briefly, to the work of Doise and Mugny, it could be that in this case a lack of socio-cognitive conflict leads to less developmental advance.

is the basis of the belief both status and epistemic influences might be at play in adult thought too.

Indeed, we can draw a parallel between the different sources of influence identified in children's conversations and processes of influence which have been observed amongst adults. Social influence processes have long been understood in terms of dichotomies between different types of source of influence (Deutsch & Gerard, 1956). Similarly, Moscovici & Lage (1976) draw a distinction between majority and minority influence. From a social psychological perspective, the respective influences of majorities and minorities intimately connect with the ways in which we legitimize our beliefs.

Majorities possess a power to influence our thought through a sheer weight of numbers. In everyday interaction majorities therefore not only represent the norm, they invariably *are* the norm (cf. Sherif, 1936; Asch, 1952; Moscovici, 1985)7. The authority of the majority is underpinned by existing social structures, by the structural features of a society or social group. We could, therefore, liken the influence of the majority to the influence of gender status which was visible amongst the children in our two studies. Both are supported and sustained by structural or social organizational features of social groups.

Minorities, on the other hand, do not have access to similar social forces. Successful minority influence (innovation) has to rely upon other means and mechanisms for cognitive change. To be influential, a minority must employ a particular behavioural style (Moscovici, 1976), principally 'consistency' in an argument (Mugny, 1982). In the face of a consistent but not dogmatic minority, an individual is more inclined to scrutinize the basis of his or her beliefs (Moscovici & Faucheux, 1972), and it is this scrutiny which, in turn, motivates "divergent thinking" and changes in one's judgment.

STYLE AND SUBSTANCE IN CONVERSATION

Now consider, once again, the processes of epistemic and status authority influence. We can certainly draw parallels between status and majority influence: both are legitimized by social structures which exist in a society and between or within groups in a society. Both share this social organizational basis. And it would seem that epistemic and minority influence have many common features too. Minority influence acts by making us scrutinize the basis of our beliefs, the reasons behind judgments. Similarly, epistemic authority is linked to a greater scrutiny of the reasons behind a particular belief. Moreover, consider the moral judgment study of communication between our children (Leman & Duveen, 1999). Although the girls ultimately persuaded the boys of their superior knowledge it took far longer. A more consistent behavioural style was, perhaps, required to convince the intransigent boys of the legitimacy of the girls' arguments.

The mechanisms through which persuasion (influence) was achieved in these children's conversations become even more apparent when examining the conversations themselves. Below are transcripts of two such conversations, both between a boy and a girl, from the moral judgment study. Both conversations are surprisingly representative of their type - in the first, a girl successfully persuades a boy, and in the second, a boy successfully persuades a girl, that the autonomous response is appropriate as a joint

7 For the present purposes, 'normalization' and 'conformity' are treated together (cf. Moscovici, 1976, 1985) since, for both, the majority or norm constitutes a basis for legitimating beliefs.

decision. The children were asked to decide which of two boys who had broken some cups in different scenarios were naughtier. The first boy, John, accidentally broke 6 cups which were unseen behind a door whilst coming down the stairs to dinner. The second boy, David, accidentally broke 1 cup whilst reaching for sweets (an act which his mother had forbidden).

In the following example of a conversation, Jade (girl, 8 years) gave a response associated with autonomous thought since she felt that David was the naughtier of the two protagonists in the moral stories. Leon (boy, aged 8 years) gave a response associated with heteronomous thought and thought John was naughtier.

Jade Why did you think John was naughtier?
Leon Because he's broke more cups and he's also knocked over a table.
Jade Yeah but when his mum called him for dinner she didn't tell him that there was a table behind the door and... to be careful did she? But David...
Leon David...
Jade But David, he's naughtier 'cos he got up on a chair and he was stealing sweets.

At the start, Jade offers Leon the opportunity to state his case, which he does. But, unimpressed, Jade responds with an alternative form of justification for her belief - that David is the naughtier of the two. Leon has little response to this, and in spite of his interruption, Jade elaborates a further justification for her judgment. The conversation continues;

Leon Yeah, but his [John's] mum was out.
Jade Yeah, but his mum still called him for dinner and she didn't tell him that there was a table behind the door, did she? What one d'you think?
Leon Well, he's only broken 1 cup so how's that being naughty, he's only broken 1 cup? And he's [David] broken about 6...
Jade But John's mum... she called him down for dinner.
Leon Yeah.

Leon responds to Jade's arguments with a new justification of his own. Jade, however, responds directly to seek to undermine Leon's argument (interestingly, at no point in the conversation does Leon address *Jade's* argument). Again Jade offers Leon the chance to outline his case, but he merely restates his earlier argument. And eventually, we see Leon's first tentative admission that Jade might have a case to consider. Gradually, the conversation draws to a close;

Jade And his [John's] mum never told him there was a table behind the door and he pushed it a little bit. 'Cos he just pushed it open and she never told him that there was a table behind the door when she called him down to dinner, did she? So I've got a point, ain't I? But David... he knows where the cups are. He knew that them cups were in there but he just went up.
Leon Yeah, but I've got a point because John's broken more cups.
Jade Don't make no difference, David's mum never told him.
Leon Right then, so it was him [David].

Jade's lengthy outline of her arguments appears, eventually, to be accepted by Leon. But he is not quite ready to admit to that acceptance in full. Leon is keen, instead, to reach some sort of compromise whereby the legitimacy of both positions is partly accepted.

Perhaps Leon is hoping that if Jade acknowledges some grounds for legitimacy in his belief that John was the naughtier there might be scope for further debate - a chance for him to open up the argument once again. Jade, however, is having none of it! And her consistency finally pays off with Leon's explicit agreement.

Jade's approach, to offer Leon the chance to outline his position is a good tactical gambit for two reasons. First, it allows for the possibility that Leon will undermine his own argument as he tries to clarify his reasons (through a sort of *reductio ad absurdum*). Second, it brings the focus of the conversation onto the reasons behind beliefs - or, in other words, it leads the conversation towards a scrutiny of the basis of judgments. And whilst at the start of the conversation it seems to Leon almost self-evident that his argument is right, Jade ultimately effects persuasion by creating a degree of uncertainty. In a very classical sense, Jade's conversation style is consistent but not dogmatic and focuses discussion upon the reasons behind beliefs. It bears many of the hallmarks of successful minority influence.

In constrast, another conversation, between Nadia (girl, 9 years) and James (boy, 9 years), demonstrates a very different style of persuasion and communication. Whether this conversation can properly be described as such is unclear - since Nadia shows no resistance to James's arguments. James has given a response associated with autonomous thought (David is naughtier), whilst Nadia has given the other response (i.e. the heteronomous response that John is naughtier). The conversation, in its entirety, is shown below.

James John's not as bad 'cos he only opened the door to get tea, but David's naughtier 'cos he's not meant to be having sweets.
Nadia Yeah.
James So David's naughtier?
Nadia Yeah.
James Go get him [the experimenter] back in then. Go say we're finished.

The speed with which James persuades Nadia, and the lack of any need to elaborate his arguments presents a stark contrast to the earlier conversation between Jade and Leon. Indeed, Nadia puts up absolutely no resistance to James, and does not even seek to explore the basis of the judgment. Conspicuously, Nadia's final duty is to go and fetch the experimenter and tell him of her accession to James's arguments.

Compare Nadia's involvement to Leon's, since both come to their respective conversations having given, independently, the heteronomous response. Leon's resistance to the arguments produced by Jade produced a conversation which explored the reasons behind each belief. Nadia's immediate compliance with James's argument leads to what, on the face of it, is a less 'epistemic' conversation.

Whilst majority influence and status influence seem geared to legitimating judgments in terms of structures in society, minority and epistemic influences rest upon a notion of knowledge as separate from the status authority in social relations. With both minority and epistemic influences we see a scrutiny of the basis of belief, or reasons and justifications as the principal mechanism in effecting influence. Indeed, in these children's conversations behavioural style appears crucial for success if a girl is to persuade a boy with her more powerful arguments. In stark contrast when a boy with more powerful

arguments 'persuades' a girl it appears to require little energy, effort and, most importantly of all, little *argument.*

The development of knowledge

Influence and development

It is odd that developmentalists have tended to ignore the connection between theories of social influence and the child's development. Both development and social influence are associated with changes in cognition, and social and developmental psychology draw upon a broad notion of 'socialization' - the influence and intervention of social processes upon our everyday cognition (cf. Moscovici, 1990).

Whilst we might conceptualize development as a process of influence (albeit a complex one), it is not the case that influence is all about development. Influence is not all about development because some cases of influence do not amount to the acceptance of beliefs on *epistemic* grounds. For cognitive change to count as development a very specific type of influence, namely epistemic authority, has to be effective.

The analogy between adult and child influence processes offers one way of thinking about the developmental task of the child. Minority influence operates by focusing attention upon the reasons, justifications and bases for our beliefs. This scrutiny of reasons and justifications simultaneously focuses attention on what might be labeled “epistemic” concerns. In our studies the older children and the intermediate children (ultimately) recognized that these reasons and justifications, these epistemic concerns, were a better way of securing an accurate judgment. For the younger children (and, for a time, the intermediate children) gender interfered with this process by creating an alternative way of legitimizing and justifying judgments. Gender here created a status influence in conversation which was too powerful for the younger children to overcome. Given these age effects, it seems plausible that the distinction between status and epistemic influences possesses developmental significance: its significance lies in the increasing ability of the older children to separate out epistemic and status aspects of influence. Being able to make this distinction requires a recognition of the autonomy of knowledge and of the self in interaction. To return to the earlier analogy, it is a little like recognizing that the majority is not always right and that knowledge has a basis beyond those provided by existing authorities and social structures of authority.

But if influence is not all about development, is development all about influence? In other words, can the development of a child's thought be described uniquely as a process of social influence? In one obvious sense we might say that it is; social representations theory tells us that it makes little sense to conceive of cognition outside of any social context (Moscovici, 1981). But development is also connected to lasting, enduring changes in cognition. In this sense it is impossible to 'undevelop', because once the legitimacy of one belief over another has been recognized it cannot be 'unrecognized'8. Of course, to talk of influence by epistemic authority is not to talk of a particular and identifiable source of "knowledge" or, indeed, a particular or specific set of beliefs which constitute "knowledge". As studies of social influence demonstrate, what counts as

8 Of course, this belief could be overturned when a still more legitimate explanation is encountered.

knowledge can be an uncertain matter for adults and children alike. But, to invoke the idea of enduring cognitive change we can return, once again, to the ideas of minority and majority influence processes in adults.

For Moscovici (Moscovici & Lage, 1976) majority influence is associated with *compliance*; public acceptance of a belief or argument, without private acceptance. Minority influence, on the other hand, is associated with *conversion*; no public acceptance, but private acceptance of an argument. The conversion which minorities induce is a result of deeper and more extended information-processing as a result of the validation processes which are associated with successful minority influence (Nemeth, 1986; 1995). Conversion is associated with more enduring and more stable cognitive change. Compliance, in contrast, is a result of a social comparison process and is associated with less enduring changes in cognition (Moscovici, 1980).

In this sense we can see that minority influence relies upon the scrutiny of beliefs or the reasons behind beliefs in a way that majority influence does not. And a consequence of this deeper level of scrutiny is a more solid integration of relevant types of information into an individual's cognitive framework. In this sense, we could certainly compare the longer-term effects of influence to the development of a child's thinking. And whether it is epistemic or minority influence which is at work (and both appear to share similar mechanisms), the outcome is stable and enduring changes in cognition.

Perhaps the comparison here between minority or epistemic influence and development is not so straightforward. For example Duveen (1983) has suggested that development might be a particular combination of influence processes incorporating public *and* private acceptance. In this sense development involves processes of both validation and some sort of social comparison since the child's sense of participation in the processes of social construction (and validation), the child's understanding of their own social identity has also changed (Duveen & Lloyd, 1986).

Briefly returning to our earlier example of a conversation between Jade and Leon, it is clear that Leon's private acceptance of Jade's arguments *is* accompanied, necessarily in this experimental context, by his (grudging) public acceptance. And, in this sense, the epistemic authority of Jade's arguments only succeeded in influencing Leon because the previous basis of social relation was overturned - because Jade invokes something beyond the *status quo* and beyond the conceptualization of gender as a basis for knowledge. In order to persuade Leon, Jade had to "abstract" the question (and the basis of judgment) from a social context which identified knowledge with gender and suggest a new context - a new basis for the social relation. Jade had to convince Leon that validation and not social comparison was the appropriate basis for legitimating their beliefs.

CONSTRAINT AND COOPERATION REVISITED

Epistemic and minority influence correspond to enduring changes in cognition, are linked to specific behavioural styles in argument, and effect an influence by making individuals scrutinze the basis of their beliefs. However, from a developmental perspective we clearly need something more - a particular type of cognitive change which cannot be undone and which results in changes both in cognition and in the child's social activities.

In this sense, the outcomes of both epistemic and minority influence are a shift in the structure of the social relation. When an individual or group accepts a minority view in one very important sense the minority has been, to some degree, integrated into the majority - the minority has participated in the construction of the representation on the social level of the group. This intetgration of the minority's position could be characterized as a "normalization" of the minority. In other words, the social landscape has shifted to include the perspective of the minority in the collective understanding or representation held by the majority.

Let us return, for one last time, to the conversation between Jade and Leon. When Leon is persuaded he accepts the epistemic authority of Jade's arguments. And in doing so, he must reject the status aspects of the social relation (which stemmed from the children's gender group membership) in favour of another basis for legitimizing judgment. In one sense, Leon's thought has been "normalized" because he now recognizes the legitimacy of adult judgment. But this 'normalization' has been achieved by separating the basis of their collective judgment from the structural features of the relation. So this normalization correlates with a recognition that a correct (or better) answer can be achieved through an appreciation of Jade's perspective, through a process of discussion, argument and debate, and through Jade's participation in their joint decision. Jade has successfully persuaded Leon by renegotiating the structure of the relation, and by demonstrating to Leon not only that she *has* arguments which can be brought to bear on the issue, but also that these arguments have their legitimacy too.

The renegotiation of the structure of social relations corresponds also to changes in the way the child thinks about and acts within social relations. Indeed, we could characterize Piaget’s view of development as a process of innovation - as the spontaneous construction of knowledge through interaction and the recognition and accommodation of the perspectives of others. In this sense, for Piaget, the *intersubjectivity* of thought is the key element in his developmental theory. And the transition of the child’s thought from an egocentric to a “subjectivist” or “sociocentric” (cf. Piaget, 1932) perspective is a key developmental advance.

The distinction between relations of constraint and relations of cooperation not only offers us alternative forms of social process, but also alternative bases for social cognition. With relations of constraint judgments are made within an atmosphere of compliance - the status authority in social relations, the social organizational structures which exist in society serve to legitimate judgment. With relations of cooperation epistemic influences play more of a part. Epistemic influences lead to divergent thinking and the consideration of alternative perspectives - to an innovation in thought which leads to changes not only in the form of cognition but also the structure of the social relation. Successful epistemic influence also requires that those involved in interaction recognize something of their own identity - that they themselves can be a source of conflict in conversation and that to negotiate these conflicts involves a shift from egocentric, first personal perspectives to sociocentric, third personal perspectives (Leman & Duveen, 1996). Separating these alternative social perspectives amounts to separating the status from the epistemic influences which might legitimate judgments.

Social interaction therefore provides a context in which knowledge can be communicated and constructed by children (and, to that matter, by adults too). That communication can also be obstructed by the structures of power or authority which stem

from the asymmetries in social relations. Yet although there exist both positive and negative developmental consequences of interaction, it is a necessary context for the construction of our social representations. In developmental terms, engaging in social construction requires that a degree of autonomy is both achieved and recognized. Or, to put a similar point, the child must understand the methods and routes through which representations are constructed within social relations.

Given the vulnerability of both adults' and children's thought to the influence of others, it is strange how many developmental studies are underpinned by an assumption that adults possess *the* knowledge, *the* correct, accurate and true representation of reality, and it is the content of this representation which the developing child needs to understand. However, it is clear that adult knowledge is not a fixed set of absolutes which are impervious to the influence of others. Adult judgments and beliefs also change through pressures exerted by others in society and through the acquisition of forms of understanding. Thus for adults and children alike, knowledge can be an uncertain matter, and perhaps one of the important developmental achievements of the child is precisely this recognition.

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