

Children's Reporting of Peers' Behaviour

A thesis submitted for the degree of PhD

by

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ABSTRACT

This thesis describes a mixed-methods investigation of young children's everyday social communication, focusing on tattling—the reporting of a peer's negative behaviour to an audience. There are links between tattling and the development of gossip, and thus with the evolution of cooperative norms in humans. Tattling is a daily activity for many children, but has been little studied, especially in preschool contexts.

Quantitative sampling and participant observation are used to characterize behavioural reporting among 3- to 4-year-olds in 2 preschools in Belfast, Northern Ireland. Quantitative sampling shows that children in these populations are biased towards reporting negative actions by peers; that they are more likely to report actions of which they themselves are the victims; that they usually tell the truth; that their reports are rarely ignored by staff; and that there are relationships between frequency of tattling and measures of social dominance and relational aggression. Participant observation shows that tattling takes place in a complex social context; that children are generally aware of its effects; and that it is driven by a range of motivations, both self-oriented and group-oriented.

Two story recall experiments are described, aimed at testing the hypothesis that negative bias in children's reports arises from the greater salience of negative behaviour. The experiments do not support this hypothesis, further strengthening the idea that children are acting out of strategic considerations when they report peers' transgressions. Behavioural reporting in preschool contexts is compared with a sample of transcripts of children's discourse recorded in 1970s England and stored in the CHILDES database. Examples of tattling and gossip are also found in the eHRAF ethnographic database. The thesis concludes with an interactionist model of the development of tattling and gossip, in which third-party mediation helps to integrate the affective and normative components of children's developing moral systems.

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1. INTRODUCTION

If you do not keep the multiplicity of language-games in view, you will perhaps be inclined to ask questions like: ‘What is a question?’—Is it the statement that I do not know such-and-such, or the statement that I wish the other person would tell me...? Or is it the description of my mental state of uncertainty?—And is the cry ‘Help!’ such a description?

[...] Commanding, questioning, storytelling, chatting are as much a part of our natural history as walking, eating, drinking, playing. (Wittgenstein, 1953/2001, §§23–24)

One sunny morning in nursery school, a 4-year-old boy tells his classroom assistant: “Thomas pushed me out of my way.” He means that his classmate has forcibly taken his place at the head of a line of schoolchildren who are waiting to go outside. The classroom assistant promptly removes Thomas and replaces him halfway down the line, reinstating the first child at its head.

In a different nursery school, one girl alerts another to the fact that a third girl now has the doll that she had recently been playing with: “She has your baby in her pram!” Her audience frowns, but does not act on this information—perhaps because she now has another doll in her lap.

Thirty years ago, a three-year-old girl was recorded telling her mother: “Richard [her older brother] has scribbled in my card.” Her mother questioned her: “You what? Scribbled in it?” “Yes,” replies the girl. But her mother was busy making beds, and shrugged it off: “Never mind.”

What do these three episodes have in common? They are all examples of children reporting a third party’s behaviour. More precisely, they are examples of the

reporting of a third party's negative or antisocial behaviour—behaviour that the speaker apparently thinks their audience will disapprove of. As such, they represent an activity known as *tattling* in the US, or *telling tales* in the UK. Any parent or teacher will tell you that tattling is a frequent (and frequently annoying) behaviour on the part of young children, but that it is far less common to hear them singing the praises of their siblings or peers. My main aims in this thesis are to investigate just how large a part tattling (defined in broad terms as the reporting of negative behaviour by a third party) plays in young children's social communication, and why they might do it so frequently. I take an evolutionary perspective on children's behavioural reporting because I believe that evolutionary theory should be borne in mind when trying to explain, in general terms, why large populations of people do anything. But because humans have evolved to be sensitive to their cultural context—and therefore all human behaviour is bound to vary as the context varies—I also attempt to set this activity within the detailed social and cultural context within which it was observed.

1.1 Outline of the Thesis

Children's reporting of peers' behaviour is interesting to me for four main reasons. Firstly, it offers a window on the development of gossip and related forms of social communication, which have been postulated to be of great importance in the evolution of cooperative behaviour in humans. In the first section of the literature review, I consider a range of theoretical and empirical approaches to gossip, paying particular attention to studies inspired by evolutionary theories. Secondly, the reporting of third-party behaviour by children has rarely been the focus of study, even though tattling is an everyday activity for many young children. In the second

section of the literature review I present an exhaustive review of the existing literature on tattling, and place this in the context of the limited work that exists on the development of gossip in children. Thirdly, children's everyday reporting of peers' behaviour involves the integration of several psychological competences, and thus offers a useful complement to various experimental traditions that have tended to consider each psychological domain in isolation. In the third part of the literature review, I briefly consider the psychological requirements for tattling, paying particular attention to narrative skills, moral judgements, and theory of mind. Fourthly, an everyday language activity like tattling can also be a window on the social dynamics of groups of children in various environments. I summarize existing literature on the social environment of young children and the impact that culture has on this environment, paying particular attention to the context of the preschool classroom. I conclude the literature review with a methodological note on the mixed-methods approach that I took to my doctoral research, explaining why this kind of approach was particularly appropriate for an exploratory investigation such as this one.

The remainder of the thesis is divided into five chapters. In Chapter 3, "The Behavioural Ecology of Peer Reporting in Preschool Settings," I report the results of quantitative sampling of behavioural reporting in two nursery schools in Belfast, Northern Ireland. The primary quantitative method used was event sampling of children's behavioural reports, alongside point sampling of social networks and focal follows of individual children. Although these methods were run concurrently with participant observation in the same two schools, they are reported first because they were concerned with identifying the gross characteristics of children's tattling, and the use of these results to test predictions arising from the literature review.

In Chapter 4, “The Social Context and Motivation of Preschool Children’s Tattling,” I present qualitative results from the participant observation part of the research, arguing that tattling in the preschool is a strategic activity that takes place against a background of ongoing, low-level interpersonal conflict, and is highly sensitive to social context. Through the analysis of phenomena such as counter-tattling and threats of tattling, I explore how the reporting of peers’ behaviour holds different meanings for children and adults. In this chapter, I also consider cultural differences between the two preschools studied, relating these to varying gender differences in tattling considered across the two schools.

In Chapter 5, “Experimental Studies of Children’s Behavioural Reporting,” I report the results of two recall experiments, which aimed to test whether biases in children’s behavioural reporting found in the observational results could also be observed in a controlled environment. Results for the first experiment are related to sociometric data from the observational study of children in the first preschool, who served as the participants for the experiment. The second experiment extended a similar paradigm to a slightly older age group (4–5 years). Designs for further studies in the same experimental program are also presented.

The cultural dimensions of behavioural reporting are briefly explored in Chapter 6, “A Cross-Cultural Investigation of Tattling and Gossip.” I analyze examples of talk about peers by children from various cultural groups, recorded in two major corpora: CHILDES (the Child Language Data Exchange System) and eHRAF (the Human Relations Area Files). I also discuss common patterns in ethnographic material on gossip drawn from the latter database. This rather exploratory chapter is mainly intended to lay the groundwork for more targeted cross-cultural research in the future.

Finally, in Chapter 7, I outline an interactionist theory of tattling as part of a distributed developmental system involving child, peer and adult caregiver. I also offer some concluding remarks on the implications of my work for the evolution of cooperation and the development of children's social communication, and discuss the limitations of the thesis and how these might be addressed in future research.

2. LITERATURE REVIEW

This review of literature relevant to children's reporting of peers' behaviour is divided into four main sections, along with a brief methodological note. First, I present a theoretical argument for the importance of gossip (broadly conceptualised as the reporting of third-party behaviour) to the evolution of cooperation in humans. I set this argument in the context of earlier theoretical approaches to gossip, and use it as a framework for the analysis of various empirical data about gossip, drawn from both psychology and anthropology. The review of the literature on gossip in adults is quite extensive, given that the main focus of the thesis is on children's behaviour; but it is necessary because I am hypothesizing that children's tattling is a developmental precursor to gossip—a preparation for behaviour that will become adaptively relevant later in life. Second, I note the potential contribution of developmental studies to evolutionary psychology, and summarise the existing developmental literature on gossip and tattling in children. Next, I summarize research on some of the psychological competences that are implicated in tattling, including narrative skills, moral judgement and theory of mind. I suggest that the way in which these competences develop in children may lead to detectable biases in their reporting of peers' behaviour. Finally, I outline some of the variables that influence the social and cultural context of the preschool classroom, which was the setting in which most of my research took place. The literature review concludes with an explanation of why the use of a mixture of methods was particularly appropriate for this research.

2.1 Gossip: Theoretical and Empirical Approaches

In this thesis I am using the term *gossip* as a convenient shorthand for *the reporting of a third party's behaviour to another individual*. In English, the term does carry connotations of triviality and informality (and perhaps also a slight connotation of malice; see Ben-Ze'ev, 1994), and these connotations have doubtless helped to set the agenda for research into gossip. Although I briefly explore some of these connotations in Section 2.1.2 below, they do not greatly concern me here, since I am using the research on gossip merely to provide an adult counterpart to my own and others' research on children's reporting of third-party behaviour.¹ I am more concerned with outlining the different theoretical and empirical approaches that researchers from various disciplines have taken to the study of gossip. Evolutionary psychologists have theorized that gossip plays an important role in upholding social norms; and cultural anthropologists had earlier documented the complex (and often contradictory) processes by which this actually takes place in local social contexts. Also, although gossip is a very informal social behaviour that does not lend itself easily to experimental study, a handful of social psychologists—often inspired, recently, by evolutionary theories—have examined gossip-related behaviour in controlled settings.

¹ There is also an etymological connection between adults' gossip and children's tattling. The word *tattling* was used in the 18th century—e.g., by Swift—as a synonym for *gossip* (*Webster's Revised Unabridged Dictionary*, cited at <http://dictionary.reference.com/browse/tattle>, retrieved May 18, 2009). This usage survives in words like *tittle-tattle*, and in the celebrity gossip and lifestyle magazine, *Tatler* (founded in 1709; see <http://en.wikipedia.org/wiki/Tatler>, retrieved May 18, 2009).

2.1.1 *The Importance of Gossip for the Evolution of Cooperation*

The main reason why I am interested in gossip, and related forms of communication, is because I believe that they had a major influence on the evolution of cooperative behaviour in humans. Robin Dunbar (2004b; see also 1993, 1998, 1999, 2004a) has elaborated a theory of the evolutionary significance of gossip based on the dual functions of reinforcing intimacy and excluding social deviants. Dunbar argued that informal chat—of which gossip is his main example—is analogous to the social grooming of non-human primates. The use of verbal rather than tactile grooming has enabled humans to live in much larger groups than other primates, for three main reasons. Firstly, language allows a speaker to converse with an audience of multiple individuals, making it more time-efficient than one-to-one grooming. Secondly, gossip allows people to keep in contact with geographically dispersed networks of kin members and friends, via mutual contacts. Thirdly, negative gossip encourages intra-group cooperation – which would otherwise become impossible to enforce as groups grew larger – by spreading information about the behaviour of free-riders and other norm violators. According to Dunbar (2004b):

[Language] allows us to exchange information about other people, so short-circuiting the laborious process of finding out how they behave. For monkeys and apes, all this has to be done by direct observation. I may never know that you are unreliable until I see you in action with an ally, and that opportunity is likely to occur only rarely. But a mutual acquaintance may be able to report on his or her experiences of you, and so warn me against you—especially if they share a common interest with me. Friends and relations will not want to see their allies being exploited by other individuals, since a cost borne by an ally is ultimately a cost borne by them too. (p. 79)

Instead of relying on direct observations of behaviour, that is, humans can learn about others' behaviour indirectly through the medium of language.

Dunbar (1999) also pointed out that the exchange of information about free-riders is particularly important in large groups, where interactions between any two individuals tend to be less frequently repeated, limiting the scope for individuals to use a strategy of direct reciprocity (Trivers, 1971) in determining the appropriate response. He cited as evidence the simulation studies of Enquist and Leimar (1993).² These authors found that in an iterated prisoner's dilemma game with multiple partners, even a small amount of gossip was enough to nullify the benefits to free-riders of high mobility (or large groups)—which otherwise made it easy for free-riders to find new victims whom they had not cheated before. Listening to gossip is thus adaptive for individuals who live in large groups because it reduces the chances of being exploited by norm violators, while transmitting gossip may be adaptive because it reduces the chances of kin or allies being exploited by norm violators (Dunbar, 1999).

As I and others have argued in more detail elsewhere (Ingram, Piazza, & Bering, 2009; see also Nowak & Sigmund, 2005; Piazza & Bering, 2008), the novel possibilities offered by learning about others' behaviours through language greatly expanded the scope of *indirect reciprocity* for maintaining systems of cooperation in human groups. Indirect reciprocity embodies the principle that *if you scratch my back, someone else will scratch yours* (Alexander, 1987; Nowak & Sigmund, 2005). That is, helping other individuals may be rewarded by third parties in the same population, and not only by the direct recipients of the help. Accordingly, in Enquist and Leimar's (1993) studies, cooperators in the prisoner's dilemma found plenty of cooperative partners in subsequent iterations, whereas the reputations of defectors

² See Sommerfeld, Semmann, Krambeck, and Milinski (2007) for a recent experimental study with similar results (discussed on p. 1 of this thesis).

preceded them and they were met mostly with defection. Linguistic testimony increases the transparency of social interactions that occur ‘behind the scenes’, and thus the reliability of indirect reciprocity (Nowak & Sigmund, 2005).

Discussions of indirect reciprocity have often focused on the positive benefits of prosocial behaviour. It is important to remember that reciprocity can also be negative, however (as with the tit-for-tat strategy in iterated prisoner’s dilemma games; Axelrod & Hamilton, 1981). In the context of indirect reciprocity, this means that an individual’s antisocial actions may be punished by a third party other than the immediate victim. Since the punishers in such cases are providing a public good (in the form of future deterrence of antisocial activities) at a potential cost to themselves (the risk of hostility from the initial perpetrators), this phenomenon is sometimes referred to as *altruistic punishment* (Boyd, Gintis, Bowles, & Richerson, 2003; Fehr & Fischbacher, 2004a, 2004b). Models of cooperation based on altruistic punishment and models based on indirect reciprocity are not mutually exclusive, despite arguments to the contrary (e.g., Richerson, Boyd, & Henrich, 2003, discussed by Ingram et al., 2009).³ Both types of model rely upon language, because in human societies those who punish a transgression are not always (or even often) direct witnesses to that transgression.

Some form of collectively sanctioned punishment for norm violators is probably a human universal (Brown, 1991). And it seems plausible that most such punishments – including those administered by the legal systems of complex societies – rely at least in part on the spread of information by witnesses via

³ But compare Panchanathan and Boyd (2004) for a revised model of the relationship between indirect reciprocity and cooperation, in which agents overcome the second-order free-rider problem through a “shunning” strategy of collectively withholding aid from defectors.

language. Christopher Boehm (1987) found that in a tribal part of Montenegro, where blood feuds were still common, “information that begins by being exchanged confidentially between people who are very close is passed along as a ‘secret’ until eventually it falls into the hands of people who have little sense of obligation to keep it quiet” (p. 82, quoted by Stewart & Strathern, 2004, p. 40). Boehm (1999, 2000) went on to argue that the use of language to spread information about aggressors led to the evolution of human (hunter-gatherer) societies that were highly egalitarian compared to the rigid hierarchies of chimpanzee societies. Of course, gossip can be a powerful social sanction in its own right—even among technologically advanced groups of people, such as cattle ranchers in 20th-century California (Ellickson, 1991).

Similar points about the relationship between gossip, the punishment of norm violators, and the evolution of cooperation have been made by David Sloan Wilson (D. S. Wilson, Wilczynski, Wells, and Weiser, 2000; see also Kniffin & Wilson, 2005). Wilson and his collaborators have analyzed gossip using the evolutionary framework of group selection, arguing that people generally frown upon self-serving gossip, but condone gossip that serves the interests of their social group (i.e., gossip that helps spread useful, truthful information about the activities of norm violators). This distinction between self-serving and group-serving gossip may prove useful, but in my view it is subsidiary to the distinction between judgemental gossip about negative or antisocial behaviour, and non-judgemental (or approving) gossip about neutral or positive activities. Moreover, while I am sympathetic to the concept of group selection—and especially to the dynamic conception of multilevel, cultural group selection espoused by Richerson and Boyd (2005)—I am not sure that group selection is strictly necessary for explaining how gossip might have contributed to

the evolution of cooperation in human groups. Instead, it is possible that the use of language to enforce social norms might have had important benefits at an individual level through inclusive fitness⁴ (as suggested by the quote from Dunbar, 2004b, on p. 8 above) or indirect reciprocity, or some combination of the two.

This theoretical discussion serves to illustrate the vital role that uniquely human forms of communication have in mediating complex systems of cooperation. Language increases the scope both of positive indirect reciprocity (the rewarding of prosocial behaviour by those who did not witness it directly) and of altruistic punishment (the sanctioning of negative behaviour, again by those who did not witness it). The kind of language that fulfils this role has often been labelled *gossip*, broadly defined as *communication about absent third parties* (following Dunbar, 2004b). This usage should be viewed as a convenient label, which does not correspond exactly to the reference of *gossip* as it is ordinarily used in English. Some more nuanced definitions of gossip are briefly considered in the next section, which reviews a range of approaches taken by non-evolutionary psychologists to gossip. I then move on to consider the results of a wave of recent observational and experimental studies of gossip that have been inspired by some of the evolutionary ideas outlined above.

2.1.2 *Other Psychological Approaches to Gossip*

Here I review some of the psychological approaches to gossip in adults, paying particular attention to attempts that have been made to define the term, and to characterize the main participants in gossip and the effects that gossip has on these

⁴ See Hamilton (1964).

participants. Bergmann's (1987/1993) comments on the theoretical attention paid by sociologists to gossip apply equally well to the attention paid by social psychologists:

Gossip has remained, in large part, a typically marginal phenomenon in the sociological literature. It has been acknowledged but has not been able to attract concentrated attention. It is clearly possible that this marginalization expresses the extent to which our social scientific understanding of gossip determines its social scientific treatment. For the cliché that there are more important things than gossip is a fixed part of our everyday understanding of it. (pp. 6–7)

Surveying the post-war literature, it appears that theoretical and empirical interest in gossip has tended to come in fits and starts, with a peak perhaps in the 1970s. Early work in social psychology often considered gossip in conjunction with the related phenomenon of *rumour* (especially Allport & Postman, 1947; see also Rosnow & Fine, 1976), which generally speaking is a less personal type of communication—like news, more an element of culture than a form of discourse. Subsequently the notion of gossip as interpersonal discourse took centre stage. An early example of this approach was Stirling (1956); later, several articles in an issue of the *Journal of Communication* (1977) took up the same theme (especially Yerkovich, 1977). Common features of much of this early work were uncertainty as to how best to define gossip, and ambivalence over whether gossip had positive or negative effects. This ambiguity is reflected in the etymology of the English word *gossip*: from its original meaning as the sort of harmless chat that takes place between *godsibs* (an archaic term meaning good friends; i.e., the sort of people who might serve as godparents for one's children), the word has gradually acquired pejorative connotations (Rysman, 1977). However, these negative connotations are still much more evident in the sense of *a gossip* (i.e., a person who gossips excessively) than in the sense of gossip as communication. An attempt to rehabilitate the concept of

gossip as a positive activity which contributes to social bonding was made by several authors in the volume *Good Gossip* (Goodman & Ben-Ze'ev, 1994; see especially Ben-Ze'ev, 1994; de Sousa, 1994; Emler, 1994).

Recently there has been increasing consensus around a broader, more neutral definition of gossip as *evaluative talk (positive or negative) about an absent third-party*. This definition was first introduced by Eder and Enke (1991), and was picked up by several contributors to a special issue of the *Review of General Psychology* (2004) on the psychology of gossip (e.g., Wert & Salovey, 2004). Given that evaluative processes are implicated in gossip, much theoretical effort was expended in that issue on working out the ultimate function of the evaluation that takes place. Baumeister, Zhang and Vohs (2004) considered how gossip can function as a form of cultural learning,⁵ which serves as a store of knowledge about what happens to those who violate social norms: "By hearing about the misadventures of others, we may not have to endure costs to ourselves because we will have successfully avoided making the mistake they made" (p. 112). In contrast, Wert and Salovey (2004) viewed gossip as a tool of social comparison, which is often motivated by envy, jealousy, or resentment (see Suls, 1977, for an earlier application of Festinger's, 1954, social comparison theory to gossip). Expression of such emotions through negative gossip may not be good for group morale, or for the interests of the powerful. Wert and Salovey (2004, p. 128) quoted Spacks (1985), who wrote: "The ferocity of several centuries' attack on derogatory conversation about others probably reflects justifiable anxiety of the dominant about the aggressive impulses of the submissive" (p. 30).

⁵ See Yerkovich (1977) for a similar approach.

It seems then that certain kinds of gossip may have positive effects for a social group, and other kinds may have negative effects. Turner, Mazur, Wendel and Winslow (2003) investigated how either positive or negative comments about a third party affected experimental participants' judgements of the gossipers' likeability, trustworthiness, and credibility. Oddly, they found that whatever the valence of gossip, judgements made about gossipers were more negative (along all three axes) than judgements made about members of a control group who did not gossip. Taken at face value, these results would seem to support Wert and Salovey's (2004, p. 134) contention that "gossip is considered morally suspect" by most people. But as Turner and her co-authors themselves acknowledge, the effect may be due at least in part to the artificiality of the experimental situation and the irrelevance of the confederate's comments (which concerned the experimenter's suitability for Harvard Law School). Even if that is the case, however, their results underline how gossip is subject to strict pragmatic rules: gossiping out of turn can have serious social consequences.

Considered in historical perspective, then, psychological research on gossip has been rather disparate and unsystematic, influenced no doubt by the slippery, ambiguous and seemingly trivial nature of its subject matter. Although psychologists (and others) have found it hard to agree on a definition of gossip, one thing that does seem clear is that gossip may have either positive or negative effects. It can increase solidarity between those who gossip, while damaging the reputations of those who are gossiped about.

Gossip's ambivalent moral status emphasizes that it is a complex social phenomenon which serves a variety of functions. Eric Foster (2004, drawing on Stirling, 1956) provided a useful analysis of these functions, arguing that gossip may be used to spread useful information, to reinforce friendship and intimacy, to exclude

outsiders or social deviants, or simply to provide entertainment. It is worthwhile to consider these functions in the light of evolutionary theory, and in particular, to try to work out whether they are proximate or ultimate functions (Bjorklund & Pellegrini, 2000; Mayr, 1993). In other words, do they describe ways in which gossiping is of adaptive value to individuals (or groups), or do they merely represent common motivations for gossiping? Foster's first function of gossip, that of spreading useful information, corresponds to Baumeister et al.'s (2004) conception of gossip as cultural learning. This kind of gossip is clearly adaptive; but saying that leaves unanswered the question of why such useful information is spread more effectively in the form of social narratives rather than bare statements of fact. The fourth function, that of providing entertainment, is pretty clearly a proximate function of gossip: for entertainment presumably has no intrinsic adaptive value, but rather we humans are designed by natural selection to take pleasure in gossip because it has other adaptive consequences. The remaining two functions, of reinforcing friendship and excluding social deviants, correspond quite well to the two ultimate functions of gossip discussed by Dunbar (2004b): social bonding, and spreading information about norm violators (see p. 8 above).

A developmental perspective may prove useful in disentangling the complex motivations that underpin the reporting of other group members' behaviour. Some motivations may predominate at earlier ages, while others arise later, in response to both cognitive development and involvement in more complex social environments. Participant observation can be an excellent tool for uncovering social actors' motivations; and accordingly, the motivations for children's behavioural reporting are considered in Chapter 4. However, it is also possible to test empirical hypotheses about the prevalence of various kinds of gossip that do not rely on a consideration of

the gossipers' motivation. Such hypotheses are the focus of the next section, and of the observational research reported in Chapter 3.

2.1.3 Empirical Studies of Gossip in Adults

One attractive feature of evolutionary psychology as a theoretical framework is its claimed productivity in the generation and testing of hypotheses (Cosmides, Tooby, & Barkow, 1992). This has certainly been the case for research into the evolutionary psychology of gossip. Theoretical interest in gossip was sparked by Dunbar's (1993) analogy between gossip and grooming, Emler's (1994) consideration of gossip as a "social adaptation," and Barkow's (1992) linking of celebrity gossip to a concern for social status. Since then, an abundance of empirical research has attempted to answer various evolutionarily inspired questions concerning the content and practice of gossip.

One of the most obvious questions about gossip concerns just how large a proportion of conversation it makes up. If gossip is to have played an important role in the evolution of language, it seems likely that it would be a fairly common linguistic behaviour. In one of the few quantitative studies of the content of humans' natural conversational behaviour, Dunbar, Marriott, and Duncan (1997) eavesdropped on conversations in a variety of locations, including university cafeterias, bars, and train carriages. They found that around two thirds of conversation time, on average, was devoted to socially relevant topics (personal relationships and personal experiences). However, this figure included conversations about the speaker's own relationships and experiences. As discussed above, gossip is more usually thought of as concerning third-party relationships and experiences. Third-party information did account for about one third of all social conversation

time in Dunbar and his colleagues' study, but it seems that first-party information was more commonly discussed. Nevertheless, third-party gossip was plainly a substantial component of people's conversations, at least in these contexts.

Another important question to ask—given the stereotype of gossip as a negative activity, and its postulated role in cheater detection—is whether gossip is predominantly negative in valence. In Dunbar and his co-workers' sample, the answer was clearly no: on average only 4.1% of social conversation time (less than 3% of total conversation time) was taken up by critical comments on third parties (1997, p. 240). Kniffin and Wilson (2005, pp. 281–282) argued that the lack of negative gossip in those results may have been partly because the gossipers observed in that study were wary of eavesdropping in public settings like university cafeterias, and partly because the gossipers did not necessarily share a common fate (meaning that it was less critical for them to derogate absent free-riders). By contrast, in their own quantitative study of crew members' conversations in a car going to and from rowing practice, Kniffin and Wilson found that as much as 36.3% of “personal talk”⁶ was negative, and that negative comments made up 63.0% of personal talk during one semester in which a “slacker” was present in the team (2005, pp. 286–287).

However, one might turn Kniffin and Wilson's criticism on its head by arguing that the population they were studying—a rowing team competing against other teams—was one in which the need for group cohesion was unusually strong. Furthermore, the specific situation in which they were recording conversations—the journey to and from rowing practice—was one in which evaluation of crew members' performances might be expected to take place much more frequently than

⁶ This construct corresponds quite well to the “social conversation time” of Dunbar et al. (1997).

in other social situations. It is also noteworthy that the proportion of negative comments fell drastically for the two out of three semesters when the slacker was not present: the presence of a slacker might have been very atypical in itself. Dunbar and his colleagues' (1997) samples of conversations in cafés, pubs and trains seem intuitively likely to reflect both more typical social situations, and a more representative distribution of conversational topics. Inhibition of gossip due to the risk of eavesdropping does not seem to be a big weakness of the latter authors' study, because restaurants and bars are well-known settings for private conversations: their open layout and general noisiness make it easy to see who might be listening, and difficult for anyone except people at closely adjoining tables to follow the whole thread of another table's discourse. Therefore it seems probable that negative gossip may not be as common as Kniffin and Wilson (2005) believed.

On the other hand, this does not necessarily falsify the hypothesis that gossip evolved partly as a means of cheater detection. As Dunbar (2004a) put it:

Although, in our studies of freely forming conversations, we found that gossip of this censorious type was relatively rare, it may nonetheless be that the handful of cases involving this kind of behaviour are disproportionately important in terms of their consequences for the recipients' ability to avoid exploitation in the future. (p. 107)

In other words, the adaptive benefits of reporting norm violations may cause individuals to be disproportionately sensitive to them. Negative gossip may still be important, but as Wert and Salovey (2004) argued, its deployment may be restricted to certain atypical (but socially critical) contexts, such as the sports team context studied by Kniffin and Wilson (2005). According to Wert and Salovey (2004): "Gossip may turn especially negative when one or more ... social comparison motives—self-evaluation, self-improvement, self-enhancement, and establishment of

a social identity—become especially urgent for the individual” (p. 133). The first three of these social comparison motives, at least (and in many cases the fourth as well), are clearly present in most sports teams.

As well as having a reputation for negativity, gossip has acquired another negative stereotype, that of unreliability (Emler, 1994). Like the question of gossip’s negativity, the question of gossip’s reliability is theoretically critical, from an evolutionary perspective. If gossip is to promote systems of cooperation, it ought to be reliable: either it should be mostly trustworthy, or it should be easy to distinguish between trustworthy and untrustworthy gossip. However, the question of reliability is harder to address through naturalistic research than the question of negativity, because researchers cannot rely only on what people are saying: they also need to know the facts of the matter—and where gossip is concerned, the facts of the matter are notoriously obscure.⁷ Probably for this reason, I know of no quantitative research that has systematically examined the reliability of gossip. However, there is some recent research, again inspired by evolutionary theory, which approaches the problem of reliability from the point of view of the gossip receiver. Hess and Hagen (2006) investigated the possibility that humans have reliable cognitive mechanisms for distinguishing between truthful and deceptive gossip. In a series of experiments using social psychological methods, they found that participants were more likely to believe gossip if it came from multiple sources, but less likely to believe negative gossip if the source was someone who was in competition with the subject of the gossip. Their results suggest that people may be equipped with cognitive heuristics

⁷ It gets worse: gossip is an inherently value-laden exercise (Wert & Salovey, 2004): but where value judgements are concerned, of course there often is no objective fact of the matter. In assessing the reliability of a comment like “He is such a slut,” for example, the most that could realistically be hoped for would be an assessment of whether the speaker honestly meant what he was saying.

for labelling gossip as either reliable or untrustworthy. Such heuristics would be very useful for ensuring that the efficient detection of first-order norm violators, via gossip, is not undermined by second-order norm violators, who seek to deceive other individuals about the activities of third parties.

Evolutionary psychology has also played its part in discovering the kinds of people and activities that people like to gossip about. McAndrew and Milenkovic (2002; see also McAndrew, Bell, & Garcia, 2007) found that their participants preferred gossip that concerned individuals of the same gender and age group as themselves, as measured both by their interest in real tabloid stories about celebrities, and their interest in—and self-reported likelihood of disseminating—hypothetical vignettes about various categories of people (relatives, friends, strangers, etc.). They interpreted these results in terms of people's desire for status enhancement relative to same-sex peer group members who typically serve as allies or competitors (or both). Privileged information about peers, in the form of gossip, can be used either to undermine the status of rivals, or to improve one's own reputation by proxy. Hence, participants in McAndrew and Milenkovic's (2002) study were more interested in transmitting negative information about high-status individuals, but positive information about friends, whose transgressions might reflect badly on the self. In a follow-up study, McAndrew and his colleagues (2007) found that both sexes were also selective in the people to whom they would potentially transmit gossip, with men being particularly wary of revealing information to anyone except romantic partners. This suggested to them that privileged information might be important in the sexual selection of males.

McAndrew and his team also looked at the content of gossip, finding interesting patterns in the sorts of gossip that people were interested in depending on the status

of the relationship between the respondent and the gossip target. For instance, their undergraduate participants generally said they were more interested in gossip about friends than relatives, but found their relatives more interesting when the topic of the gossip was a large inheritance or a fatal illness (McAndrew et al., 2007). As mentioned, in their first experiment McAndrew and Milenkovic (2002) used celebrity gossip stories from tabloid newspapers, and found some support for their hypothesis (inspired by Barkow, 1992) that celebrities are treated as high-status, “parasocial” acquaintances. That is, people imagine that they actually know celebrities, and do not draw much of a distinction between gossip about celebrities and gossip about their actual (high-status) friends and acquaintances.⁸ Certainly, negative gossip about celebrities is particularly prized, just as McAndrew and Milenkovic (2002) found to be the case for high-status real-life acquaintances. But even very mundane information about celebrities can be valuable—as the popularity of “celebrity lifestyle” magazines like *Hello* continues to demonstrate—in line with the idea that it is culturally adaptive for humans to indiscriminately copy the behaviour of high-status role models (see Henrich & Gil-White, 2001).

In contrast, non-celebrities have to do something sensational to get into the newspapers. Ben-Ze’ev (1994) formulated this idea quite neatly:

Whereas we are usually interested in the ordinary, everyday activities of famous people, we are characteristically interested in the nonordinary activities of ordinary people. Moreover, the more remote an ordinary person is from us, the more unusual their activity must be in order to be of interest to us. (p. 17)

An interest in the unusual activities of strangers also lends itself to evolutionary interpretation. Davis and McLeod (2003) found that the content of most sensational

⁸ See de Backer, Nelissen, Vyncke, Braeckman, and McAndrew (2007), and Piazza, Ingram, and Barkow (2009), for further developments of this idea.

news stories, across various countries and historical periods, corresponded to major preoccupations of evolutionary psychology (such as cheater detection, altruism, and the treatment of offspring). While Davis and McLeod's conception of the sorts of themes that natural selection might have designed us to be sensitive to is quite broad, their research is yet another indication that humans are equipped by evolution with cognitive mechanisms for handling strategic social information about other group members.

Given that humans are designed to live in a world filled with gossip, an important question to ask is how exposure to gossip affects behaviour. Two recent experimental studies have substantiated the simulation studies of Enquist and Leimar (1993), which originally suggested that gossip could help to support systems of cooperation among mobile organisms. Sommerfeld, Krambeck, Semmann, and Milinski (2007) conducted indirect reciprocity games in which participants were asked to write short assessments of other players based on their allocation decisions, in addition to choosing whether to donate money to other players themselves. In later rounds, this gossip was given to other players before they made their own decisions. It was found that for almost half of participants, gossip about an individual had a decisive effect in determining whether or not that individual was given any money, even in cases where the donor already had *direct* access to the recipient's past behaviour. The discussion of this striking result is worth quoting in full:

This finding suggests that humans are used to basing their decisions on gossip, rumors, or other spoken information. Such a strategy could be successful in an environment where ample gossip/information focusing on friends or other people known to the individual is available and where direct observation is potentially less common than indirect information about others. In such a world, individuals gather a lot of information indirectly by gossip from different sources. The resulting picture of any person with whom the individual is in social contact would be much more refined than the picture based on

the small amount of direct observation of these people. (Sommerfeld et al., 2007, p. 17438)

If this interpretation is correct, then an individual should be sensitive not only to direct observation of antisocial behaviour, but also to whether such observations are likely to be passed on to others who are linked to the individual by social ties. This was exactly what was found by Piazza and Bering (2008) using an anonymous dictator game: participants donated significantly more money when told that the recipient would disclose the value of the donation to a confederate to whom the donor had just given identifying information, compared to when a confederate had not been given the identifying information. Awareness of the effect of gossip on reputation thus seems to be a determining factor in people's generosity towards strangers, and perhaps, extrapolating from this, in their moral behaviour more generally.

The empirical studies discussed in this section present a very complex picture of the human competence for producing and understanding gossip. This is fitting, given that gossip itself is such a complex and nuanced form of communication. The briefness of my discussion does not really do justice to the complexity of the studies' findings; but nevertheless, for the purposes of my thesis, four main conclusions can be drawn. Firstly, gossip—broadly defined—is not overwhelmingly negative, despite the stereotype (see articles in Goodman & Ben-Ze'ev, 1994); but negative gossip may predominate in certain situations, and especially in competitive situations. Secondly, humans are adept at assessing the reliability of gossip, which suggests that the accuracy of the information conveyed by gossip is important to those who receive it. Thirdly, gossip about high-status individuals seems to be particularly prevalent. Finally—in apparent confirmation of the links between gossip, indirect

reciprocity and altruistic punishment that were postulated in Section 2.1.1—gossip about individuals tends to influence how the gossip recipients behave towards them, while the threat of being gossiped about also influences how gossip targets behave.

Much of this literature contributed to my research design, especially for the behavioural ecological study of children's peer reporting set out in Chapter 3: as I describe in more detail in Section 3.1, it helped me to frame predictions regarding the frequency, negativity, reliability, content and social context of this form of communication. The effects of third-party reporting on children's behaviour are not a part of my current research program, but would make a rewarding topic for experimental study in the future.

2.1.4 The Anthropology of Gossip

It would be an enormous task, far beyond the scope of this thesis, to catalogue all the ethnographies that incorporate some discussion of the concept of gossip (at least in passing). Early ethnographies that contain very extensive discussion of the role of gossip or rumour in a particular social group—and that were cited by Gluckman (1963) in his influential functionalist analysis of gossip—include those by Herskovits (Herskovits & Herskovits, 1964; Herskovits, 1975) on peasants in Trinidad and Haiti, respectively; Kluckhohn (1974) on the Navajo Indians; West (1945) on rural life in Midwestern America; Colson (1953), who studied the Makah Indians of the Pacific Northwest; and Frankenberg (1957), who conducted research in a Welsh industrial village. Since 1963, selected book-length ethnographies which contain noteworthy treatments of gossip include those by Campbell (1964), on Sarakatsani shepherds in Greece; Haviland (1977b), on the Tzotzil Indian community of Zinacantán in Mexico; Boehm (1987), who analyzed blood feuds in

Montenegro; Gilmore (1987), on small-town life in Andalusia; Acheson (1988), on lobster-fishing communities in Maine; Ellickson (1991), who studied informal systems of social control among cattle-ranchers in California; Brison (1992) on gossip and village politics in Papua New Guinea; Mintz (1997), who analyzed the role of gossip in carnival traditions in Cádiz, Spain; and White (2000), on rumours of supernatural assault by white colonials on black Africans.⁹ While this list is clearly not enough to demonstrate that gossip is a human universal (especially since many of the aforementioned ethnographies happen to have been set in a European or North American context), it does show that gossip takes place in an impressive range of social settings, and has been considered an important phenomenon by many anthropologists. Indeed, anthropology has sometimes been derided as the “science of gossip” (W. G. McFarlane, pers. comm.).¹⁰ While I think this is completely unfair as an assessment of anthropology’s contribution to the study of humanity—especially since it overlooks the real importance of gossip in the maintenance of social order—it does reflect the methodological fact that ethnographers have often relied on gossip in composing their portraits of everyday life in various communities (cf. Bergmann, 1987/1993, pp. 9–17, for a rather more measured assessment of this process).

Anthropologists themselves have been quite aware of their reliance on gossip. This awareness has led to theoretical musings on the nature and function of gossip, which reached their peak in the 1960s and 1970s, when many articles were published on the subject (Abrahams, 1970; Bleek, 1976; Cox, 1970; Epstein, 1969; Faris,

⁹ Fox’s (2005) treatment of gossip in her book on the unspoken rules of (upper middle-class) English behaviour is very popular in style, and rather tongue-in-cheek in tone, but also well worth reading.

¹⁰ Note however that the only reference to this phrase in print, that I could find, claimed that it had been applied to *sociology* (Hollis, 1980, p. 243).

1966; Gluckman, 1963; Handelman, 1973; Hannerz, 1967; Paine, 1967; Szwed, 1966; P. J. Wilson, 1974).¹¹ The spark for this theoretical interest was a well-known debate between Max Gluckman (1963, 1968) and his former student, Robert Paine (1967, 1968). In an article that was very influential, even though it was quite light-hearted in tone, Gluckman articulated a classic functionalist position, asserting that gossip has an important role in maintaining group cohesion:

Clearly [gossip and scandal] maintain the unity, morals and values of social groups. Beyond this, they enable these groups to control the competing cliques and aspiring individuals of which all groups are composed. And finally, they make possible the selection of leaders without embarrassment. (1963, p. 308)

Thus the group-serving functions of gossip, according to Gluckman, are threefold. First, gossip helps to uphold social norms: partly because the fear of negative gossip may deter individuals from violating norms, and also because evaluative talk about norms helps to reinforce individuals' sense that they are part of a social group who share these norms. Here Gluckman anticipated recent interest in the role of gossip in punishing norm violators (see Section 2.1.1 above), although he saw negative gossip more as a punishment in itself than as a mediator of more concrete forms of punishment. Second, gossip is a kind of covert aggression, fought out behind the scenes, "so that many villagers, who are actually at loggerheads, can outwardly maintain the show of harmony and friendship" (Gluckman, 1963, p. 312). The importance of this point will be clarified later in this thesis (Section 2.2.1), when I review the developmental literature on the use of gossip for indirect, relational and social aggression. A third point, which has not so often been directly picked up on by other writers, is that gossip can help with the process of selecting a leader, because it

¹¹ These articles and others, as well as several of the ethnographies mentioned above, were very usefully summarized by McFarlane (1978).

“enables a group to evaluate people for their work, their qualities of leadership, and their moral character, without ever confronting them to their faces with failures in any sphere” (Gluckman, 1963, p. 313). A separate but related point was made by Suls (1977), who argued that explicit comparison with those higher in status could be embarrassing for those who made the comparison, and therefore that such comparison was more likely to be done indirectly, via gossip.¹²

In his critique of Gluckman’s article, Paine (1967) took issue mainly with the second of these putative functions of gossip: the use of gossip as concealed aggression. He claimed that Gluckman’s argument contained a contradiction: “On the one hand, gossip is recognized as promoting unity in the sense of impressing the fact of common membership; on the other, it is supposed that gossip can destroy the unity which is, anyway, now referred to as ‘the pretence of group amity’” (Paine, 1967, pp. 279–280; compare “the show of harmony and friendship” in the second quotation from Gluckman above). According to Paine, gossip is better seen as a competitive activity practised for the benefit of individuals rather than groups:

It is the individual and not the community that gossips. What he gossips about are his own and others’ aspirations, and only indirectly the values of the community. (1967, pp. 280–281)

However, Gluckman’s (1968) reply did a good job of rebutting this criticism. The key point he made was that gossip is a form of *indirect* aggression (as in the developmental literature reviewed in the next section). It does therefore make sense to suppose that the expression of aggressive impulses between individuals can help to hold a society together, because these aggressive impulses are not expressed

¹² There are also resonances here with the work of Wert and Salovey (2004) on the “social comparison” motive for gossip, and with McAndrew and his collaborators’ investigation of people’s propensity to gossip about celebrities and other high-status individuals (reviewed in the previous section).

openly, but are restrained and controlled within the rule-bound cultural activity of gossip: “Since gossip is a social *as well as* an individual phenomenon, it has built-in restraints and sanctions” (Gluckman, 1968, p. 31, emphasis in original). Even the *pretence* of amity may have real effects. “The pretence of amity is important, even if people are at loggerheads: for the pretence keeps a group functioning on occasions as a group with an internal order and some shared allegiance to goals and values” (ibid.). Gossip may be aggressive behaviour that serves the interests of individuals; but the rules by which that behaviour is governed, and which prescribe its indirectness, are cultural rules that are imposed by the group as a whole, and that serve the group’s collective interests.

The debate between Gluckman and Paine left its mark on subsequent anthropological treatments of gossip, which often attempted to present gossip as both an individual and a collective activity. For instance, in an approach that had similarities to Baumeister et al.’s (2004) analysis of gossip as “cultural learning,” John Beard Haviland (1977b) argued that gossip, among the Tzotzil-speaking Indians of Zinacantán in Mexico, often focused on normative rules, helping to reinforce in the gossipers’ minds the consequences of breaking these rules. In a topic frequency analysis, he found that gossip was dominated by subjects such as drunken (mis)behaviour, extraordinary wealth or poverty,¹³ fallings-out between kinsfolk, judicial punishment, divorce, and illicit sexual relations. Thus his work seems to support the idea that gossip is concerned with the reinforcement of group norms; but Haviland also emphasised (especially in a separate article, 1977a) that gossip may be instrumental in furthering individual or factional ends. He acknowledged that this

¹³ Relative wealth is very much a normative matter in small-scale societies, which typically have a strong norm of equality.

competitive gossip is a form of aggression: “Bad words are like physical blows: they violate personal space, and their heated exchange leads to colder but harder legal and social repercussions—tearing apart kin, friends, and neighbors” (Haviland, 1977a, p. 187). A more extended analysis of gossip as “covert aggression” was produced by David Gilmore (1987, ch. 4) in a study of small-town life in southern Spain. Gilmore argued that anthropologists had tended to over-emphasize the social effects of gossip, rather than the emotions and motivations of the individuals concerned—as if they were afraid to admit that malicious gossip sometimes takes place out of sheer spite (cf. Stewart & Strathern, 2004, pp. 200–201).

Like Gluckman (1963), Gilmore (1987) drew an interesting parallel between gossip and witchcraft: “The subject of the spiteful talk is like the victim of witchcraft: he or she sickens and suffers through a magical covert aggression” (p. 68). In a ground-breaking book, Pamela Stewart and Andrew Strathern (2004) systematically explored the oft-noted (but little-analyzed) connections between witchcraft, sorcery, gossip, and rumour. At one level, “rumors and gossip play an important part in the overall processes that lead to witchcraft accusations” (Stewart & Strathern, 2004, p. 194). In societies where witchcraft is seen as a real—and dangerously counter-normative—behaviour, the activities of witches may form a frequent topic of gossip (as was demonstrated by the quantitative sampling of Haviland, 1977b). Witchcraft accusations, like negative gossip in general, may be motivated either by a genuine fear of the accused or distaste for their behaviour, or by a strategic attempt to damage their reputation—whether out of envy, spite or ambition. Any or all of these motives may co-exist, of course.

At another level, however, gossip itself can act in an oddly similar way to the ways in which witchcraft and sorcery are imagined to act, due to the ability of the

gossip author to strike anonymously and from a distance: “The anonymity of the writer [of an unsigned letter in a professional context, containing accusations of wrongdoing against a colleague] gives the person the character of a sorcerer, whose harmful actions are openly seen but who hides from taking responsibility for them” (Stewart & Strathern, 2004, p. 56). Moreover, negative gossip increases (and witchcraft is believed to increase) in social and historical contexts that are characterized by high degrees of tension and ambiguity. It is tempting to speculate that the fear of witchcraft and sorcery—so widespread in agrarian societies at a certain level of political integration—is an image of the fear of malicious, anonymous gossip, refracted through the lens of belief in supernatural agents. Stewart and Strathern themselves did not push their argument quite so far, but they did conclude their book with an analysis of gossip as a highly ambiguous behaviour, oriented either towards a pole of social integration or a pole of “hostility and disruption”. This ambiguity is increased when the poles are ideologically merged, as in the activities of African “witch-finders,” who preach social integration while providing an outlet for their own and others’ ambition and aggression:

Rumor and gossip both flourish in ambiguous social contexts and contribute further to such ambiguity, serving both selfish and collective interests. Through rumor, as through other forms of social communication, conflict and cohesion coexist, fueling the constant principle of struggle in life. (Stewart & Strathern, 2004, p. 202)

This brief summary of the extensive anthropological literature on gossip leads to several conclusions that are relevant to my thesis. Firstly, gossip has been investigated in a wide range of human societies. There are no well-known counter-examples of societies where gossip is almost absent, so it seems reasonable to conclude that indulging in informal conversations about the activities of absent group members is probably a human universal. Secondly, gossip has a highly

ambivalent moral value, being associated on the one hand with the promotion of group solidarity, but on the other with the exercise of individual aggressive impulses. While gossip is clearly a ubiquitous behaviour, it is also feared and despised in many societies, and associated with low-status sub-groups (especially women). Thirdly, anthropologists have tended to focus on the “dark side” of gossip—on its role as an instrument of covert aggression and social competition, rather than its more innocent role of simply spreading information about who is doing what with whom.

There are a number of interesting points of contact between the anthropology of gossip and the work discussed earlier in the literature review. I showed in Section 2.1.2 above that English-speaking psychologists and philosophers have tended to conceptualize gossip activity as a morally dubious and potentially damaging activity (Ben-Ze’ev, 1994). Since similar concerns have been reported from non-English-speaking societies, it seems that they are categorically associated with the behaviour of speaking informally about the activities of absent others—i.e., they are not just an arbitrary semantic property of the English word *gossip*. The encapsulation of this ambivalence in the Gluckman-Paine debate, in terms of the differences between the group-serving and self-serving functions of gossip, has been theoretically productive. D. S. Wilson and colleagues (2000) referred to this debate when arguing that self-serving gossip is socially derogated, for evolutionary reasons, whereas group-serving gossip is tolerated or even encouraged. This leads to the important question of how people learn to distinguish between self-serving and group-serving gossip from others, and how they learn to inhibit the (presumed) tendency to propagate self-serving gossip themselves. In answering this question, a developmental perspective comes into its own.

2.2 Children's Talk about Third-Party Behaviour

I agree with Bjorklund and Pellegrini (2000, 2002) that a developmental perspective is vital for a better understanding of the evolved psychology of a slow-developing species such as humans. Their approach was inspired by the growing influence of developmental systems theory on evolutionary biology: according to this theory, developmental biases place important constraints on the evolution of complexity and diversity in all organisms (Brakefield, 2006; Lickliter & Honeycutt, 2003). A consideration of whether particular psychological dispositions or biases are *ontogenetic* adaptations (i.e., have adaptive value for an individual at that point in their lifespan), or *deferred* adaptations (i.e., serve as preparations for behaviour that will have adaptive value later in the lifespan) can lead to different interpretations of children's and adults' behaviour, and generate productive hypotheses (see also Hernández Blasi & Bjorklund, 2003). Here, I make the preliminary hypothesis that tattling in children is a deferred adaptation that prepares children for the role of gossip in deterring norm violations in adult life.

Furthermore, evolutionary theory can contribute to developmental psychology by providing a "meta-theory" of child development, connecting different areas of research that have tended to be analyzed within isolated traditions. (Bjorklund & Pellegrini, 2000, p. 1703). In this way, an evolutionary study of children's behavioural reporting might help to integrate work on language development with work on social cognition, moral psychology and theory of mind (see Section 2.3).

2.2.1 *The Development of Gossip in Children*

Unfortunately, the development of children's talk about peers' behaviour is not easy to trace, especially at younger ages. There is a considerable literature on gossip

among adolescents (e.g., Bamberg, 2004; Cameron, 1997; Eder & Enke, 1991; Fine, 1986), which has emphasized the prevalence of evaluative talk about peers at this pivotal developmental stage. Similar patterns of evaluative talk are common among pre-adolescents (Fine, 1977, 1987; M. H. Goodwin, 1990, 2005; Kuttler, Parker, & La Greca, 2002). Evaluative talk by peers is likely to be important in the formation of individual reputations and identities as children move closer to adulthood (see Krebs, 2005).

Several groups of researchers have considered evaluative talk in these age groups in terms of the theoretical constructs of *indirect*, *relational* and *social aggression*. In a review, Archer and Coyne (2005) argued that these three constructs tap into essentially the same sort of social behaviour: all three involve using other members of the group to “get at” the target of the aggression and cause them psychological harm. For example, Crick and Grotpeter (1995, p. 711) defined indirect aggression as “harming others through purposeful manipulation and damage of their peer relationships” (p. 711). Similarly, social aggression describes “the manipulation of group acceptance through alienation, ostracism, or character defamation” (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989, p. 323, quoted by Archer & Coyne, 2005, p. 217). Since these sorts of aggression involve the manipulation of third-party relationships—getting other people to do the perpetrator’s dirty work, in many cases—they naturally tend to be covert, representing “an alternative aggressive strategy used for individual or situational reasons when the costs of direct confrontation are high” (Archer & Coyne, 2005, p. 213). According to Lagerspetz, Björkqvist, and Peltonen (1988), who systematized the study of indirect aggression in children, “one feature of indirect aggression is that the aggressor may remain unidentified, thereby avoiding both counterattack from the target and disapproval by

others” (p. 404). There are commonalities between this kind of aggression and the sort of indirect retaliation that is involved in altruistic punishment as mediated by linguistic reporting, as discussed in Section 2.1.1 above (see especially Boehm, 1999).

Indirect aggression and related activities are common in middle childhood, pre-adolescence, and early adolescence. By this point children have developed the social intelligence required to use such a strategy effectively, but the formation of their reputations is still at an early stage, and therefore they have much to gain by manipulating others’ reputations and much to lose by direct confrontation. For these age groups, gossip is one of the items most frequently used when determining the frequency of indirect aggression (and related constructs).

However, few observers of any theoretical persuasion have recorded gossip among children younger than 9 years of age. Fine (1977) claimed that children as young as 3 can gossip, but admitted that early forms of talk about peers are rarely covert: “One salient difference between the social structure of adult gossip and that of children is that adult gossip is virtually always about non-present others, whereas children often gossip in front of the target” (p. 183; cf. M. E. Smith, 1932, for an early study of young children’s overt criticism of others). Yet as I showed in my section on defining gossip and tattling, the absence of the gossip target is crucial to most (even broad) definitions of gossip. Furthermore, although Fine (1987) published very useful research on preadolescent gossip, the evidence provided for his assertion that preschool-age children can gossip rested solely on his own unpublished observations and a personal communication from a developmental psychologist, Elizabeth Nolan (cited by Fine, 1977, p. 181). It is possible to find other researchers who put a different spin on the matter: for example, Mettetal (1983,

p. 719) cited a personal communication from J. M. Gottman to the effect that gossip-like discussions between preschoolers were not common. This may well reflect definitional differences: I suspect that Fine and Nolan may have been thinking of tattling (and similar verbal behaviour) as a form of gossip, whereas Mettetal and Gottman may not have been including it in that category.

Gwendolyn Mettetal's own (1983) study was one of the few pieces of quantitative, naturalistic research on children's gossip. After coding and analyzing the natural conversations of dyads of girls aged 6–7, 11–12, and 16–17, she found that the frequency of gossip increased dramatically between the youngest and middle age groups, remaining at a similar level in the oldest group: "It seems that children begin to gossip some time between the ages of 7 and 11, and by late childhood about one-third of their conversation consists of gossip" (Mettetal, 1983, p.730). A similar longitudinal pattern, for younger age groups, was found by Engel and Li (2004), who asked three groups of children—aged 4, 7 and 10—to tell stories about their friends in semi-structured interviews. The length, descriptiveness and evaluative content of the stories all increased significantly with age, implying that the younger children's stories were far less informative than the older children's. This supported Engel and Li's naturalistic observation, from tape recordings of conversations in a daycare centre, that 4-year-old children very rarely tell stories about absent peers: "It was surprisingly difficult to catch the children gossiping" (2004, p. 160). Thus the lack of literature on young children's gossip is probably because they just don't engage in such a complex social activity.

Presumably because of the elusiveness of young children's gossip, researchers on indirect aggression and related constructs have not tended to look for examples of gossip when studying this age group. For example, in using teacher questionnaires to

study relational aggression in the preschool, Crick, Casas, and Mosher (1997) did not attempt to code for gossiping per se, but instead included items like “Tells others not to play with or be a child’s friend” and “Tries to get others to dislike a peer.” Such behaviours might be motivated by similar sentiments to negative gossip, but they do not contain the informational content about others’ behaviour that is characteristic of both gossip and tattling. Since tattling is the reporting of a peer’s negative behaviour to an authority figure, such as a teacher or parent, often with the motivation of punishing the other child, it appears to be a classic example of indirect aggression. Unfortunately, tattling seems to have been ignored or overlooked by researchers in the fields of indirect, relational and social aggression, perhaps because it usually involves using an adult, rather than another member of the peer group, to punish a peer.

2.2.2 Previous Studies of Tattling

Tattling is defined by one dictionary¹⁴ as: “To tell tales; to communicate secrets; to be a talebearer; as, a tattling girl.” Like most definitions of gossip, this definition carries connotations of triviality and possibly also of malicious intent. For the purposes of this thesis, however, I define tattling more broadly as *the reporting by children of another child’s negative behaviour to a third party*. This was how I operationalized tattling in the observational research described in Chapter 3. It also provides a counterpart in terms of children’s behaviour to the broad definition of *gossip* given on p. 7. Such a definition demarcates a very wide semantic field, of which tattling is just one patch. It ensures that very few false negatives are left out of

¹⁴ Webster's Revised Unabridged Dictionary. Retrieved May 19, 2009, from <http://dictionary.reference.com/browse/tattle>.

the data; but it might also let in some false positives that others might not want to label as tattling. Moreover, the use of the phrase *negative behaviour* is deliberately vague. Other researchers (notably Friman et al., 2004) have preferred the term “proscribed behaviour,” but I have found that children often report behaviour which they do not like but which is not technically proscribed by an authority figure, and I do not wish to describe such reports as mistaken or misfiring tattling. For present purposes, the definition given above will suffice, because I am not so much interested in the precise referent of the ordinary-language term *tattling*, as in tattling as a prominent exemplar of a broad class of communication about other agents’ behaviour.

Although the word *tattling* is primarily associated with young children’s activity, the activity itself—as broadly defined above—is not confined to children. An analogous activity, known by a variety of colloquial monikers such as “snitching,” “squealing,” or “grassing,” is practised by criminal elements when they report crimes to the police (Rosenfeld, Jacobs, & Wright, 2003; Yates, 2006). Snitching is a highly derogated activity among the criminal fraternity, and those who practise it are subject to the most severe sanctions. Indeed, an entire social institution (the witness protection program) has evolved to protect snitches from the reprisals of those whom they report. Adult “tattling,” then, can be useful to society as a whole but damaging to the welfare of the individuals (and entire sub-groups) within a society who are the targets of tattling. This is also true in the case of corporate *whistleblowers*, who are often portrayed as heroes by the media, but hounded by their bosses for disclosing “sensitive” information about their shady dealings (Brewer & Selden, 1998).

However, the particular word *tattling* does have connotations of childish behaviour. As such, it is not surprising that it has traditionally been disapproved of

by educationalists, and seen as a practice that children needed to be educated away from doing (Williams, 1989). Although not infrequently mentioned, it has rarely been analyzed in depth, but more often simply listed as an example of undesirable behaviour (e.g., Hurlock & McDonald, 1934; McConnell, 1963). A more detailed early treatment was by M. E. Smith (1932), who noted that negative “criticism” of a third party by children was much more common than positive comments; and that unlike adults, children often made their criticisms within earshot of the target—a key difference between tattling and gossip. This suggests that children did not see anything counter-normative about the act of tattling, even in an era when tattling was likely to be frowned upon by adults.

In the last couple of decades, however, there seems to have been a change in teachers’ attitudes towards tattling. Rather than seeing tattling as simply an “annoying behavior” (McConnell, 1963), to be discouraged at all times, many educators have realised that tattling is not always motivated by troublemaking or attention-seeking (though examples of this point of view can still be found, e.g., Payne, Mancil, & Landers, 2005). For example, Hewitt (n.d.) argued that tattling is often an attempt by children to clarify the moral rules of the classroom, and should therefore be responded to according to the specifics of the situation:

Merely admonishing students not to “tattle” is not the answer to the complex issue of reporting on the behavior of others. We must *teach* a problem solving process which enables individuals to: help protect themselves and others, discover the expectations in a changing and often confusing world; and teaches them how to handle their feelings and get their needs met in a healthy way.

Likewise, in a book aimed at teachers and parents, called *Telling Isn’t Tattling*, Hammerseng (1995) tried to distinguish between the unwanted and unnecessary activity of tattling on trivial events, and the desirable and necessary activity of

reporting significant events that the parent or teacher hadn't witnessed. Her advice was to act on reporting but not on trivial tattling, to help give children a sense of the transgressions that matter. A recent US Government pamphlet (Substance Abuse and Mental Health Services Administration [SAMHSA], 2004) made a similar distinction between tattling and reporting, but based on motivational criteria: "Tattling involves trying to get someone *in* trouble; reporting, trying to get someone *out* of trouble."

SAMHSA's focus on motivation may not be very helpful, however, since children's motivations in tattling are rarely self-evident, and even the well-meaning reporting of trivial transgressions might get irritating if it was too frequent. Many educators focus instead on teaching young children conflict resolution and negotiation skills so that the children can deal with minor disputes themselves—e.g., by telling another child exactly why they didn't like a particular behaviour—rather than constantly running to the teacher. In a qualitative study, DeMasters and King (1994) claimed that this worked well in the kindergarten classroom that they studied, with a noticeable reduction in tattling, and increase in social harmony, as the school year went on.

Apart from M. E. Smith's (1932) early and rather unsystematic study of children's "criticism," no previous quantitative study has focused on tattling in a classroom setting, to my knowledge.¹⁵ The only modern quantitative research into tattling in any environment was by Hildy Ross and Irene den Bak-Lammers, who carried out a longitudinal study of tattling between Canadian sibling dyads aged 2

¹⁵ When Nucci and Turiel (1978) observed the responses of preschool children to moral and conventional transgressions by peers in naturalistic settings, one of the categories of responses that they considered was that of verbal reports of transgressions to the teacher. This was not the focus of their study, however, but just one category of response.

and 4 (den Bak & Ross, 1996) and 4 and 6 (Ross & den Bak-Lammers, 1998).¹⁶ Siblings were observed in their family homes and all their utterances recorded for later analysis. For all the age groups studied, tattling made up a large proportion of talk about the sibling's behaviour. This proportion decreased with age—although it also increased in absolute frequency—ranging from 87.1% among the 2-year-olds, through 74.8% among the four-year-olds, to 56.4% among the 6-year-olds. One of the main aims of the behavioural ecological study reported in Chapter 3 was to find out whether the preponderance of tattling in young children's communication about siblings would generalize to their communication about unrelated peers.

Tattling on peers is quite prevalent among children in elementary school settings, as Skinner, Cashwell and Skinner (2000) anecdotally attested for the 9- to 10-year-old children with whom they studied (see also Skinner, Neddenriep, Robinson, Ervin, & Jones, 2002). Skinner and his colleagues had some success with their program to encourage "tootling" – a term they coin for the reporting of prosocial behaviour, and thus an antonym for tattling – by providing a collective reward for the class when they reached a target number of "tootles" (cf. Bowers, McGinnis, Ervin, & Friman, 1999; Morrison & Jones, 2007). Implicit in their account was the point that tattling, unlike tootling, does not have to be rewarded directly in order to take place. Its motivation is presumably (at least some of the time) a predisposition on the part of the tattler to seek justice for a perceived wrong. In some situations tattling may be motivated by processes of emotion regulation (Thompson, 1994). Cooney, Hutchison and Costigan (1996) postulated that toddlers' tattling is an

¹⁶ The methodology for these studies was influenced by Judy Dunn's extensive naturalistic studies of young children's spontaneous justification and condemnation of everyday social behaviour, in family settings (reviewed by Dunn, 1988, 2006; see especially Dunn & Munn, 1987).

intermediate stage in emotion regulation—supplanting direct physical aggression, but preceding more sophisticated forms of negotiation with peers that do not rely on adult intervention.

By adolescence, the reporting of misdemeanours to adult authority figures seems to become much less common. In an investigation of tattling among teenagers in a residential care program, Friman and his colleagues (2004) found that perceived rates of tattling correlated negatively with likeability and positively with social rejection. And long ago, Barnes (1904) found in an experimental study that most university students would refuse to report a peer for cheating if the penalty for cheating was severe (expulsion from the university). Tattling may thus become socially proscribed within the peer group during (or just before) adolescence, perhaps because adult authority figures come to be seen as out-group members rather than surrogate family members. It could also be that as children become more independent, relying on a third party to fight one's battles begins to be taken as a sign of weakness, the negative effects on one's reputation cancelling out any benefits of receiving external help (except in extreme circumstances). The resulting internal conflict—juggling the contradictory demands of authority figures to report any transgressions that affect their authority, and of peers to stay mum—was described, through the lens of Victorian literature, by Clark (1996), but does not seem to have received much (if any) attention from developmental or social psychologists.

From this brief survey of the existing literature on tattling, the following preliminary conclusions were drawn, and used to inform the research design. Firstly, tattling is a widespread activity among young children, but one that has been little studied in any context—and that has never been systematically studied in the context of the preschool classroom. Secondly, tattling is a public activity: young children are

quite open about reporting other children's behaviour, no matter what the consequences are for those on whom they report. Thirdly, tattling may involve the socialization of aggressive impulses, representing an intermediate stage between physical violence and negotiation when a child is confronted with unwelcome behaviour from a peer. Fourthly, as children grow older tattling becomes both less frequent and less overt: it seems to become socially proscribed (as is snitching among criminals), while the covert reporting of peers' activities to other peers—gossip—becomes more common..

The developmental literature on indirect aggression—like the ethnographic literature on covert aggression—shows that gossip can be used as a weapon of social competition; but it also shows that this weapon is wielded in increasingly subtle ways as children grow older. Tattling is a good example of this developmental change, because overt tattling is very common in early childhood, still common (though not such an overwhelming part of social communication) through middle childhood, but much less common (and associated with marginalized individuals) by adolescence. Therefore, tattling appears to be a good case study for investigating how children learn that, when it comes to communication about others' activities, the interests of the group—in terms of maintaining sub-group solidarity—often trump the interests of the individual.

Before presenting the results of my own studies of tattling, it is worth setting out the psychological competences that are necessary for any form of gossip or tattling to develop in children. Examining the development of these competences from an evolutionary perspective will help to give an idea of the evolutionary pressures that have shaped tattling and gossip.

2.3 Psychological Foundations of Behavioural Reporting

In this section, I show that the reporting of peers' behaviour requires the integration of psychological competences across several cognitive domains. As Bjorklund and Pellegrini have argued, "an evolutionary perspective provides a common ground for interpreting all aspects of human behaviour—social, emotional, cognitive—and may serve to integrate the often disparate subfields of psychology" (2000, p. 1703). This section will help to set peer reporting in its ontogenetic and phylogenetic context, as a verbal behaviour that builds on other cognitive mechanisms. The underlying theme is that certain features of children's evolved psychology are likely to introduce biases into their verbal behaviour. By examining these competences and biases, I aim to generate novel predictions that can be tested against the results of the observational, experimental and cross-cultural studies of behavioural reporting that are described in the rest of my thesis.

The reporting of another individual's behaviour to a third party imposes one obvious psycholinguistic requirement on the reporter: the ability to accurately identify, recall and narrate the behaviour of other individuals. In addition, if it is accepted that behavioural reporting, like gossip, tends to be inherently evaluative, then this imposes another requirement: the ability to discriminate between desirable and undesirable behaviour. In this ability we may find the beginnings of a child's moral judgements. It is also worth considering what benefits a child receives from reporting behaviour to an audience. The audience is presumably conceived by the reporter as an intentional social agent who will respond favourably (from the point of view of the reporter) to the information that they are given. Thus there is a need for the child who tattles to have elements of a theory of mind. In the next three sections I

investigate how behavioural reporting implicates certain abilities in the areas of language, moral psychology and theory of mind. In my opinion, the study of children's reporting of peers' behaviour can be used to shed light on the development, evolution and mutual interdependence of these abilities.

2.3.1 Narrative Abilities and Egocentrism

When considering the evolution and development of language, it is sometimes overlooked that language is not a monolithic entity.¹⁷ Rather, *language* is the label we give to a collection of cognitive/behavioural tools that are used for various pragmatic purposes (Wittgenstein, 1953/2001).¹⁸ One prominent class of linguistic techniques is *narrative*—the reporting of events that have happened in the past¹⁹. Narrative relies on an important property of language that is sometimes called “displacement”—the capacity of language to refer to entities or processes that are not present in the immediate perceptual scene (Crystal, 1997, following Hockett, 1960; see also Chafe, 1994; Tomasello, 2003, p. 270). Most animal (and much human) communication is simply about drawing attention to entities or processes in the immediate perceptual scene—or about influencing action more directly, as with imperatives. A very few forms of non-human communication—most notably the

¹⁷ For example, a frequent criticism of Dunbar's (2004b) account of language evolution is that it does not account for the multiplicity of language forms—and in particular, for the informational content of declarative forms of language (G. F. Miller, 2002). If language is simply verbal grooming, then why do we not just sit around grunting pleasantly at one another? Part of the answer may lie in the capacity of language to disseminate information about the activities of norm violators and the state of a social network, as discussed in section 2.1.1 above; but it must be admitted that Dunbar (2004b) did not devote much attention to this question, nor did he attempt to delineate any stages in the evolution of various forms of language.

¹⁸ This point was made by Tomasello (2003, especially pp. 44–45), in an account of language development that was partly inspired by Wittgenstein; see also Tomasello (2008) for a related account of the evolution of language.

¹⁹ Indeed, “reporting an event” was listed by Wittgenstein as one of the multiplicity of language games (1953/2001, §23).

“waggle dance” of honeybees (von Frisch, 1966)—may achieve displacement in space. However, only humans have been known to report events that are displaced from the immediate situation in time: only humans create narratives.

The development of narrative abilities in children is therefore an important research topic, and one that has been well studied. At the most basic level, narratives depend on the ability of children to make declarative statements about the world. Bates, Camaioni, and Volterra (1975) argued that “proto-declarative” statements arise during the “illocutionary phase” of children’s linguistic development, in which words function much like pointing or other forms of gesticulating, to draw attention to something in the immediate perceptual scene that the child finds interesting or problematic (see also Bruner, 1975; Harding & Golinkoff, 1979). A proto-declarative is essentially “a command for the listener to attend to or assume some piece of information” (Bates et al., 1975, p. 208). As children reach the age of 2 to 2.5 years, they start to talk about events displaced in time from the present (Hudson & Shapiro, 1991; Tomasello, 2003, pp. 270–276), but it is only by age 3 that they start to use coherent narrative forms (Fivush, Haden, & Adam, 1995). With these developments, the child moves out of the illocutionary phase and begins to perform *locutionary* acts, in which the specific content of the spoken words is recognized by the speaker as important in reconstructing a perceptual scene in the mind of the audience.

Much of the research on the development of narrative skills has focused on the growth of children’s narratives during their interactions with parents (e.g., Fivush, 1993; Peterson & McCabe, 1994, 2004; Oppenheim, Emde, & Warren, 1997; Wigglesworth & Stavans, 2001). When such everyday narratives have been recorded by naturalistic methods, their content has accordingly been very personal, and even

egocentric, in tone—they mostly involve the recounting of familiar events from the child’s past that serve as part of the stock of “family stories” (Pratt & Fiese, 2004). Perhaps this is due to a more general *egocentric bias* (Krauss & Glucksberg, 1969; K. H. Rubin, 1973; Scarlett, Press, & Crockett, 1971): young children might tend to talk about their own everyday activities more than those of their peers, because their own activities are the ones they find intrinsically interesting, and they are unaware that their audience may not find them quite so fascinating (of course, parents probably do find their own children’s activities more interesting, thus providing reinforcement for this developmental system).

Whatever the reason, children’s narratives about peers have been comparatively little studied (with the exception of the study by Engel & Li, 2004, that was discussed in Section 2.2.1 above). My thesis can make a contribution to this literature, since reports of peers’ misbehaviour typically take the form of narratives (or at least micro-narratives). Children’s tattling also seems to bridge the gap between illocutionary acts, performed to attract attention, and locutionary acts, performed to provide information. Most tattling refers to events that took place in the recent past, or even ongoing events that are still taking place in the immediate perceptual scene, but some tattling refers to events that are further back in time.

In summary, the reporting of peers’ behaviour rests on a child’s early narrative skills. The order in which children acquire those skills—at first talking egocentrically about events that are close at hand and affect the children themselves, and later generalizing to events that are farther back in time and affect others— influences the proportional contents of children’s reports.

2.3.2 Moral Judgements and Affective Reactions

The reporting of others' behaviour tends to be evaluative (see the literature reviewed on p. 14 above). As such, it requires some conception of right and wrong (or at least, good and bad) on the part of the reporter, which suggests some kind of moral judgement. It might be argued that primitive, egocentric incidences of children's tattling do not require any kind of moral judgement to take place, but simply an evaluation of another's behaviour as undesirable—as having negative consequences for the tattler. This raises the question, however, of why children who witness undesirable behaviour tend to verbally describe to their audience the event that has taken place, rather than simply voicing their displeasure, for example by bursting into tears. One possibility is that children's egocentrism leads them to assume that their audience will automatically share their negative evaluation of a third party's action. I will return to this argument in the conclusion to my thesis, following in-depth qualitative analysis of tattling episodes in Chapter 4.

There is another dimension to the links between moral judgement and behavioural reporting, which concerns the nature of moral rules. On the first page of *The Moral Judgment of the Child*, Jean Piaget (1932) argued that: "All morality consists in a system of rules, and the essence of all morality is to be sought for in the respect which the individual acquires for these rules" (p. 1). Sometimes, children may report behaviour which doesn't affect them negatively in any direct way, but which they perceive as negative because it violates a social norm. From an early age, children appear to be oriented towards obtaining punishment for such norm violations. This might appear to support Lawrence Kohlberg's idea—building on Piaget's work—that the first stage of children's moral development is based around

authority and punishment: actions are seen as wrong if they are likely to be punished by an authority figure (Kohlberg, 1976, 1981).

However, I think Kohlberg's approach minimizes the extent to which children have a natural propensity to internalize and enforce social rules. Punishment, or the threat of punishment, may not actually be needed to instill the idea that a certain action is wrong. An alternative hypothesis, put forward by Leda Cosmides and John Tooby, is that humans are innately sensitive to cultural norms and are hard-wired to detect norm violations, by means of a so-called "cheater detection" module (Cosmides, 1989; Cosmides & Tooby, 1992; cf. Cheng & Holyoak, 1985). Cosmides repeatedly found that adults performed better in reasoning about norm violations, in a modified version of the Wason selection task, than in either a standard version of the task or a version presented in terms of social (but non-normative) content.

A similar bias appears to be present from early childhood—as might be expected, since children must acquire a large number of cultural norms in just a few years. In a series of experiments inspired by Cosmides's results, Paul Harris and Maria Núñez (1996) showed that 3–4-year-old children's deontic reasoning about actions that breach a permission rule is superior to their indicative reasoning about actions that breach a description rule. That is, participants in their experiments were better at identifying a picture where a child was "doing something naughty" than a picture where a child was "doing something different" (1996, Experiment 4; see also Núñez & Harris, 1998; Harris, 2000, ch. 7). Moreover, such reasoning does not appear to be dependent on adult-enforced rules: three-year-old children spontaneously offer to swap toys with one another, suggesting that they possess the concept of a contractual exchange (Isaacs, 1933, cited by Harris, 2000, p. 154); and they also identify fictional children as naughty if they fail to follow through on their side of such a

bargain (Harris, Núñez, & Brett, 2001). Harris (2000) summed up this research program as follows:

By the age of 2 or 3 years, children have acquired a generalized notion of an obligation—an action that has to be carried out, or carried out in a particular way. On this account, it is misleading to portray the young child as someone who thinks of each novel obligation as a new conceptual departure. Rather, any novel obligation is understood in the light of a well-organized, pre-existing concept of constraint. The constraints in question can be imposed by a variety of parties—by adult prescription, by a peer agreement, by prudential considerations and even by physical laws. In all such cases, children articulate the constraint by talking about what someone *has to* or *must* do. (p.158, emphasis in original)

On Harris's account, it seems that the concept of a constraint or rule may from a very early age be prior to the concept of punishment, *for any given rule violation*. And if young children are naturally sensitive to rule violations in an experimental context, the same cognitive bias may be reflected in their naturalistic verbal behaviour, through a propensity to tattle on what they perceive to be rule violations, rather than to discuss behaviour—even unusual behaviour—that is in accordance with the rules.

As Harris argued, children seem to be able to generalize about norm violations very easily. A similar point was demonstrated by Rakoczy, Warneken, and Tomasello (2008), who conducted experiments in which an experimenter demonstrated novel games (e.g., “daxing”), played by unfamiliar rules, to 2- and 3-year-old children. When a puppet came along and broke these rules, the 3-year-olds made both “normative protests” (e.g., “That’s not how you do it!”) and “imperative protests” (e.g., “Don’t do that”). The 2-year-olds were apparently too young to make a significant number of normative protests; but even at such an early age, they were given to making imperative protests about the puppet’s behaviour.

Very young children seem to be sensitive, then, to any activity that is defined in a normative way, such as a rule-governed game. But the question remains of whether

they are likely to report any violations with equal weight, or whether they find some types of violations more serious than others. A similar question has been the focus of an important school of research in moral development, known as the moral/conventional tradition. The central ideas of this tradition were developed—partly building on, and partly in opposition to the Kohlbergian tradition—by Elliot Turiel (1983, 2002) and co-workers including Larry Nucci (2001) and Judith Smetana (1981, 1988). Their experimental evidence suggested that many children have attitudes towards norm violations that fall into two basic clusters. Some violations, such as physically assaulting a classmate, are seen as more serious, universal, and independent of the pronouncements of authority figures. These are taken to be moral violations. Others, such as chewing gum in class, are seen as less serious, not generalizable to all cultures or situations, and revocable by someone in authority. These are taken to be conventional violations. A common feature shared by many of the former cluster (the moral violations) is that they seem to involve some sort of *harm* that is done to a victim.

Researchers in this area have typically found that children are able to make “moral” judgements of why an action is wrong, based on avoiding harm, before they make conventional judgements. This fits well with Kohlberg’s theory, in which the two pre-conventional stages of moral reasoning are believed to precede the two conventional stages. Also, older children are better able to distinguish between moral and conventional rules (Tisak & Turiel, 1988), and very young children tend to justify conventional rules in terms of punishment avoidance (Smetana, 1981; Yau & Smetana, 2003)—as predicted if they have acquired only Kohlberg’s first stage of moral reasoning. As Krebs (2005) has argued, it might be of adaptive value for older children to gain an increasing sensitivity to conventional rules as they acquire more

freedom and responsibility, and begin to meet a wider range of people beyond their own immediate kin and peer groups.

In recent years, the moral/conventional tradition has been the subject of extensive criticism and debate (e.g., Haidt, 2001; Haidt, Koller, & Dias, 1993; Nichols, 2002; 2004; Sripada & Stich, 2005). One prominent criticism has been that Turiel and his colleagues used rather polarized examples of moral and conventional behaviour—such as stealing versus wearing pyjamas to school—ignoring a wealth of ambiguous intermediate examples. However, this does not seem to invalidate the clustering of the traits of seriousness, generalizability, and authority dependence observed in the definition of a piece of behaviour as a moral violation, for a moral/conventional theorist might assert that the terms are being defined as prototypes or poles on a scale rather than as mutually exclusive categories.

A weaker part of moral/conventional theory is perhaps the claim that moral violations are uniquely associated with actions that are seen to cause harm. Jon Haidt (2001; Haidt et al., 1993) and Shaun Nichols (2002; 2004) have both suggested that other strong feelings apart from harm—notably disgust—may motivate moral or quasi-moral rules. Although Haidt (2001) has been very sceptical of the moral/conventional program, Nichols has been more sympathetic, arguing that the central cluster of findings are “quite robust” (2004, p. 6) and provide powerful evidence for the emotional foundation of children’s—and ultimately adults’—moral judgements. According to Nichols’s (2004) model:

Core moral judgment implicates both an affective mechanism and an internally represented set of rules, a normative theory. The normative theory and the affective system are independent mechanisms, but they somehow conspire to produce the distinctive responses tapped by the moral/conventional task. Affective response infuses the harm norms with a special nonconventional status, and this status seems to be

shared by other Sentimental Rules, like norms prohibiting disgusting behaviour. (p. 29)

This model may be applied quite naturally to an activity like tattling. For since tattling involves the reporting of negative behaviour to a third party, it seems to require some sort of normative theory: an assumption that the audience will react against the behaviour about which they are informed, because it is wrong. However, in cases where there is a strong affective reaction to a transgression—for instance, when a moral violation has taken place, or indeed when the tattlers themselves have been victimized—there is an additional motivation for the transgression to be reported. An obvious prediction, then, is that moral violations should be more frequently reported (relative to their frequency of occurrence) than conventional violations. I will return to this prediction early in the next chapter.

For now, it is worth simply re-emphasizing the following points:

1. Tattling seems to require some sort of normative theory.
2. For judgements about certain actions, according to Nichols (2004), the normative theory always works in tandem with an affective response (at least in normal individuals).
3. Actions that violate the normative theory are more likely to be reported than actions that do not violate it, because of the need to be alert to the activities of social “cheaters” (as discussed earlier in this section).

2.3.3 Theory of Mind and Deception

As discussed on p. 48, the reporting of behaviour to a third party seems to imply some awareness of the audience’s likely attitudes to the information that they are given. This seems to implicate a theory of mind: some notion on the part of the reporter that the information they give to the audience will change the intentional

behaviour of the audience. There is a vast developmental literature on theory of mind, and it is difficult to do more than scratch the surface of it here (for concise reviews, see Flavell, 1999; Wellman, 2002). The term “theory of mind,” in its developmental usage, was coined by Premack and Woodruff (1978), who used it to refer to chimpanzees’ ascription of intentions to human agents. However, research on theory of mind soon became strongly associated with the false belief task, which measures children’s ability to represent other agents’ beliefs where these do not accord with their own (Wimmer & Perner, 1983; see Wellman, Cross, & Watson, 2001, for an extensive meta-analysis). This is clearly a more complex mental activity; and in recent years, there has been a growing consensus that the development of theory of mind in young children is a gradual process consisting of a series of stages, beginning with the ascription of goals and intentions and moving onto the ascription of higher-level constructs such as desires and then beliefs (see, e.g., Bloom & German, 2000; Bogdan, 2003; Tomasello, 1999).

At what stage of theory of mind development do children begin to tattle? It is probably not necessary for the tattler to possess a full-blown “belief/desire” theory of mind, which allows children to pass the false belief task, and which typically develops around the age of 3 to 4 (Wellman, 1990, 2002). This would be problematic, for tattling is known to be very common already among 2-year-olds (den Bak & Ross, 1996). Instead, it is probably sufficient for the tattler to be aware that seeing leads to knowing—and therefore that if an audience has not seen a transgression, they probably do not know about it, and may well change their behaviour if they are told about it. Children as young as 2 years have been shown to be aware of the link between seeing and knowing, since they are sensitive to an adult partner’s knowledge state when indicating where the latter should look for a toy,

tending to provide information about the toy's location only if the adult did not witness the toy being hidden (O'Neill, 1996). Children as young as 22 months are also aware of the related distinction between new information and information that is "given", or already known (O'Neill, 2005; O'Neill & Happé, 2000). It is an interesting empirical question whether, in everyday social contexts such as tattling in preschool classrooms, children are also more likely to give more details about events that are news to their audience than about events that their audience has witnessed directly.

In comparison to the truthful reporting of others' behaviour, one social practice that may require a more highly-developed theory of mind is *deception*. Opinion is divided on whether deception requires a concept of false beliefs. Some have claimed that deceptive behaviour is fully developed only by the time children are 4, since only then do they understand the effects of their deception on the beliefs of their audience (Sodian, 1991; Sodian, Taylor, Harris, & Perner, 1991). Others have argued that informal acts of social deception are frequently observed in the home and classroom from the age of 2—and hence if deception is not observed in an experimental situation, that may be due to the constraints of the laboratory environment (Newton, Reddy, & Bull, 2000; Reddy, 2007). Indeed, deception in 3-year-olds has been observed under several experimental paradigms (Chandler, Fritz, & Hala, 1989; Hala, Chandler, & Fritz, 1991; Lewis, Stanger, & Sullivan, 1989; Polak & Harris, 1999; Talwar & Lee, 2002, 2008; see reviews by Subbotsky, n.d.; Lee & Talwar, 2008). One possible explanation for the appearance of deception only in certain experimental contexts is that some experimental tasks impose more executive demands than others: Carlson, Moses, and Hix (1998) found that 3-year-old children deceived more frequently in a task which required high inhibitory

control (deceptive pointing) than in a task which did not require such control (the use of misleading pictorial cues).²⁰ Further, 3-year-olds' frequent failure on false-belief tasks may also be due to the high levels of executive functioning—in terms of suppressing the true location of an object—typically demanded by these tasks (Carlson et al., 1998; Carlson & Moses, 2001).

Although deception has been systematically observed in everyday social situations (e.g., Newton et al., 2000), studies have tended to focus on parent/child interactions, which are likely to be dominated by games of pretence and by denials of personal wrongdoing on the part of the child (see Lewis et al., 1989; Polak & Harris, 1999; Talwar & Lee, 2002).²¹ Studies of deception in the context of children's naturalistic peer interactions are harder to find. Indeed, I know of no systematic study of truthfulness and deception in the context of adult gossip—a lacuna that presumably reflects the difficulty of ascertaining the truth value of everyday statements about other people's activities. It thus seems worthwhile to examine the truthfulness and accuracy of children's reporting of peers' behaviour—properties that clearly feed into the reliability of tattling as an evolutionarily relevant system of communication about norm violations. Study of the everyday uses of truthfulness and deception in complex social contexts may also shed light on the development of different stages of theory of mind.

* * *

²⁰ See also Hala and Russell (2001).

²¹ In this context, it is noteworthy that children were more likely to lie in defence of a parent if they themselves were unlikely to get the blame for a transgression that had occurred out of sight of the experimenter (Talwar, Lee, Bala, & Lindsay, 2004).

In this section, I have sketched out three psychological domains that are implicated in children's reporting of others' behaviour. In each case, I have argued that children's evolved cognitive mechanisms may generate biases in the information that is communicated. Firstly, young children's egocentrism may lead them to narrate events that had negative consequences for themselves, rather than for other individuals. Secondly, a general sensitivity to norm violations may cause tattling to make up a disproportionate part of reports about others' behaviour; and a specific sensitivity to moral rather than conventional violations may cause reports of these transgressions to make up a disproportionate part of tattling. Thirdly, an immature theory of mind may mean that children find it difficult to tattle deceptively. The literature reviewed in this section fed into the research design for my behavioural ecological study of tattling: in particular, it helped to shape some of the predictions that are outlined in Section 3.1.

2.4 The Social Context of Tattling

Tattling does not occur in a social vacuum. It can only be understood properly if one considers its context in a child's world. In this section, I outline a few important aspects of young children's social environments that have been a consideration in this research. Firstly, I review the evidence that preschool children live in highly ordered dominance hierarchies. This is important if tattling is to be related to indirect aggression (see Section 2.2.1 above), since the function of dominance hierarchies, in all animal societies, is to regulate aggression. Secondly, I discuss how young children use language to achieve reconciliation with peers. This issue is worth examining because tattling can potentially lead to reconciliation through the intervention of a third party who is interested in both of the other parties' welfare.

Thirdly, I review some basic gender differences in the social behaviour of preschool children, since children of this age spend much of their time in peer groups that tend to be quite segregated by sex. Finally, I look at cultural differences in young children's social behaviour, which cannot be ignored in the study of any form of verbal communication, especially if this study is being used to support an evolutionary argument.

2.4.1 Dominance Hierarchies in the Preschool

While analyses of dominance in children at an individual level had been made since the 1920s (see Hawley, 1999, for some early references), in the 1970s it was realized that young children followed well-defined dominance hierarchies in their peer groups, a form of social organization which closely mirrors that found in non-human primates (McGrew, 1972; Sluckin & Smith, 1977; Strayer & Strayer, 1976). Dominance hierarchies in both humans and animals have often been viewed as functioning to reduce aggression in social groups, but this does not imply that they are adaptations designed by group selection: they could simply be epiphenomena arising from individuals' dyadic coordination based on knowledge of each others' competitive abilities (Hawley, 1999).

Although the dominating behaviours of very young children resemble those of non-human primates, there is an interesting developmental shift in the kinds of behaviour associated with dominant individuals. Among toddlers, the most physically aggressive children tend to dominate their peers; but by age 6, direct physical aggression is more associated with peer rejection, and the most dominant children—operationalized as those who are best at gaining access to desired resources—tend to use more prosocial strategies, such as persuasion, to get what

they want (Hawley, 1999; La Freniere & Charlesworth, 1983; Strayer & Trudel, 1984). Four-year-old preschoolers tend to be placed at an intermediate stage in this process: direct aggression still works some of the time, for some individuals; but others have moved on to more indirect means of social control (Hawley, 1999). Accordingly, dominance rankings for preschool children have sometimes been calculated using indices of physical aggression (e.g., Sluckin & Smith, 1977; Strayer & Strayer, 1976), and at other times using influencing behaviours, such as telling another child what to do, that are more akin to leadership behaviours in adults (e.g., Barner-Barry, 1988; La Freniere & Charlesworth, 1983). Yet however they have operationalized dominating behaviour, most researchers in this area have emphasized that dominance is a relational construct, which can be investigated properly only by analyzing the total interaction on both sides of a dyad. For example, a child who is struck by a peer is classed as submissive to his assailant only if he does not retaliate (Strayer & Strayer, 1976); while a child who is told what to do by a peer is classed as submissive only if she does as she is told (Barner-Barry, 1988).

The development of children's dominance behaviour from direct coercion to indirect influence dovetails neatly with the evolutionary approach of Henrich and Gil-White (2001), who distinguished between coercive dominance and freely-conferred prestige, which is essentially an extension of dominance into the domain of symbolic thinking, and therefore a uniquely human social capacity. Prestige, as conceived by Henrich and Gil-White, is an agent of social learning and thus of cultural evolution, since prestigious individuals tend to be imitated by others and to draw their attention. Indeed, dominant individuals have been shown to garner disproportionate amounts of attention both among children (e.g., La Freniere & Charlesworth, 1983) and among primates in general (Chance, 1967). The association

between dominance/prestige and attention is an interesting one, since a behaviour like tattling seems aimed at attracting an audience's attention to a particular social problem.

As a complex social behaviour involving peers, tattling is likely to be profoundly modulated by dominance hierarchies. Tattling might be used by submissive children as a retaliatory aggressive strategy that does not involve direct aggression. Alternatively, tattling might be used by dominant children to seek attention from adults and peers. A specific hypothesis concerning the relationship between tattling and dominance was developed and tested in the behavioural ecological study reported in Chapter 3. Dominance hierarchies are thus a good example of how a sensitivity to social context can provide new insights in the study of children's language development.

2.4.2 Language and Reconciliation

Children's tattling is often triggered by episodes of conflict with peers. To investigate tattling therefore requires a familiarity with patterns of conflict and reconciliation among young children. By the time they reach preschool, children's conflicts are already quite complex affairs, which may be initiated and terminated in many different ways (Killen & Turiel, 1991). Killen and Turiel compared groups of preschoolers in two social contexts: semi-structured peer groups in which adults did not intervene; and schooltime free play, in which adult intervention was more common. They found that even when adults did not intervene, children were often responsive to normative protests on the part of peers, and used simple reconciliation strategies to resolve conflicts by themselves.

The use of reconciliation strategies by children is not surprising given our primate heritage. Individuals from a wide range of primate species have been observed to actively reconcile following conflicts with members of their own social group (e.g., Aureli, 1997; de Waal, 2000; de Waal & Roosmalen, 1979; Kappeler & van Schaik, 1992; Silk, 2002). De Waal (2000) has argued that far from contributing to the break-up of social groups—as Lorenz (1963/1966) believed—controlled aggression is an important part of primate social life. It forms one of several options for resolving conflicts of interest, the others being avoidance of an adversary and sharing resources with an adversary (tolerance). Reconciliation is important when the two parties are familiar with each other and have a confluence of interest by virtue of living in the same group of mutually supporting individuals: in de Waal’s words, when “aggressors and victims share a past and can be expected to share a future” (2000, p. 586). Several studies have applied De Waal’s ideas about reconciliation, and his methodology of using matched-control samples to compare the social behaviour of post-conflict individuals with individuals in the same social group who had not been involved in conflict, to the study of childhood conflicts (e.g., Butovskaya & Kozintsev, 1999; Butovskaya, Boyko, Selverova, & Ermakova, 2005; Verbeek & de Waal, 2001). The most relevant work for this thesis, however, has been a series of studies by Laura Horowitz, Tomas Ljungberg, and their collaborators (Horowitz, 2005; Horowitz, Jansson, Ljungberg, & Hedenbro, 2005; Ljungberg, Horowitz, Jansson, Westlund, & Clarke, 2005), who investigated the role of language among normally developing preschool children and among children with specific language impairment (SLI). They showed that children with SLI found it more difficult than their peers to use complex pragmatic tropes—apologies, jokes, compliments, and so on—as reconciliatory gestures after a conflict. Language-

impaired children did not seem to engage in any more conflicts than unimpaired children, but they typically had more difficulty with reconciliation after the conflicts that they did engage in.

Tattling fits into this framework in that tattling can involve the achievement of reconciliation through the recruitment of a third party. Although this might not be the explicit aim of children who report peers' behaviour to adults, mediation and the promotion of reconciliation might be typical parts of the repertoire of adult responses to children who are seeking conflict resolution. In this respect, tattling differs from gossip, which normally takes place after the event—and, if negative, is likely to be vengeful rather than aimed at resolving a current conflict. But like gossip, tattling involves the use of language to create a three-way bonding dynamic between individuals. As de Waal (2000) has pointed out, grooming is often used as part of the reconciliation process in non-human primates, but this is usually a two-party affair (though he does cite the example of a senior female chimpanzee who used grooming of two dominant males to help resolve their conflict). Since language, according to Dunbar (2004b), fulfils similar functions to tactile grooming but with much more potential for third-party involvement, language clearly allows third parties to get more involved in achieving the reconciliation of other group members—a reconciliation that is often likely to be in the third party's interests due to the strengthening of group cohesion.

2.4.3 Gender Differences in Play and Aggression

Although the current thesis is not primarily concerned with issues of gender, sex differences must always be kept in mind in developmental research, because children live in highly gendered worlds and tend to exhibit robust sex differences in various

kinds of social behaviour. For example, preschool-age boys tend to engage in more rough-and-tumble play than do girls of a similar age (Pellegrini, 1987, 2007; Pellegrini & Smith, 1998), and older boys engage in more physical aggression than girls. Girls, on the other hand, have been postulated to engage in more verbal and relational aggression (though this is controversial; see Archer & Coyne, 2005; Underwood, Galenand, & Paquette, 2001), and some studies have found that they engage in slightly more pretend play than boys (e.g., Jones & Glenn, 1991). It would be surprising if such differences were not reflected in differences in some way in children's reports of peers' behaviour, either for example in reporting boys physical aggression absolutely more because it happens more often, or reporting girls' physical aggression more because it is more unusual. Given the small sample sizes in all strands of the current research, it was not possible to answer such questions with any authority. However, potential gender effects are evaluated throughout the thesis, and possible reasons for them discussed.

2.4.4 Cultural Differences in Social Development

Although there are certain universals in human development (Brown, 1991)—at a general level, all children must adapt to a society of adult individuals who are more powerful than themselves and more culturally knowledgeable, but who also care about their welfare—there are also many differences in development across various cultural settings. Many authors (e.g., Nelson, 2007; Rogoff, 2003) have argued that an awareness of cultural differences, for example in infant care practices, must be at the centre of any consideration of children's developing psychological functioning: “Having a flexible repertoire of behaviours would allow for differences, such as different attachment styles, that might be beneficial in some rearing environments

and not in others” (Nelson, 2007, p. 64). These differences are likely to multiply as children grow older and their social behaviour and cognition become more sophisticated. In the specific domain of children’s narratives, Burger and Miller (1999) showed that there can be striking differences between the narratives of working-class and middle-class children, even from the same city.

Children’s play is another area relevant to the current research where profound cultural differences have been demonstrated. For example, Göncü, Jain and Tuermer (2007) analyzed differences between the play of low-income African-American, European-American and Turkish children and that of the middle-income European-American children who dominate the developmental psychological literature—as well as cultural differences between the three populations that they studied. For instance, Turkish children played less with adults than did American children, and did not enjoy access to an abundance of toys. Similarly, Gaskins, Haight and Lancy (2007) found that adults in Yucatec Mayan communities did not cultivate play in their children as much as did adults in Taiwanese or Euro-American communities.

In the present research I was careful to study children from a variety of schools, whose intake differed with respect to social class and cultural background. In Chapter 6 I also present the results of two database surveys which helped to put my research in cross-cultural perspective. Since humans are cultural animals and are adapted to living in cultural worlds, any wide-ranging evolutionary argument about human behaviour should include such a cultural dimension (see, e.g., Greenspan & Shanker, 2004; Nelson, 2007; Richerson & Boyd, 2005; Tomasello, 1999).

2.5 The Use of Mixed Methods in Social Research

There is a striking methodological divide between qualitative and quantitative methodologies in the social sciences. Generally speaking, researchers on each side of the divide have viewed their own theories and methods as fundamentally incompatible with those deployed on the other side (in practice, if not in principle). The use of mixed methods has been advocated as a way of overcoming this methodological division (see articles in Brannen, 1992; Cook & Reichardt, 1979; Tashakkori & Teddlie, 2003). The dichotomy between qualitative and quantitative methods was nicely deconstructed by Hammersley (1992), who pointed out that qualitative insights not only contribute to the initial framing of experimental or other quantitative hypotheses, but frequently lead to their *re*-framing as problems are overcome and assumptions overturned in the course of quantitative research (see Fine & Elsbach, 2000, for a similar argument). Furthermore, Hammersley maintained, the ubiquitous use of language such as “frequently,” “tended to,” “hardly any,” “typical,” or “in general” by qualitative researchers means that they are implicitly making quantitative claims, albeit rather imprecise ones. The difference between quantitative and qualitative research may therefore be less a matter of kind and more a matter of degree, linked to the degrees of methodological standardization and metrical precision that are required by different research schools: “what is involved is not a simple contrast between two opposed standpoints, but a range of positions sometimes located on more than one dimension” (Hammersley, 1992, p. 51).

It is not surprising, then, that many researchers—particularly those who are collaborating across disciplines, or who work in areas such as educational research

that are characterized by a high degree of interdisciplinarity—have advocated mixing methods as a way of breaking down the artificial divide between qualitative and quantitative paradigms. For example, Johnson and Onwuegbuzie (2004) argued that mixed-methods research should be seen as a third methodological paradigm in its own right, which in certain contexts may be superior to the deployment of either qualitative or quantitative methods alone.

The use of multiple qualitative and quantitative methods in the current research context was suggested by the exploratory nature of the study. Given the potential theoretical importance of children's reporting of peers' behaviour, combined with the lack of previous quantitative observations of this activity, this thesis was aimed at generating and beginning to test simple hypotheses about the general characteristics of young children's social communication. The use of an experimental methodology is particularly well suited to hypothesis testing, but because it returns only a narrow set of data it is not well suited to exploratory research. Participant observation is ideal for exploratory research, but because it is necessarily rather unsystematic, achieving a well-balanced characterization of the properties of tattling also required some quantitative research in order to ensure that the results of participant observation were not overly distorted by observer bias.

Quantitative sampling methods (drawn from behavioural ecology) were therefore used in order to characterize as many properties of the behaviour as possible and to test certain simple, descriptive (rather than causal or comparative) hypotheses arising from theoretical considerations (see Chapter 3); while remaining open, via participant observation, to diverse interpretations of the meaning of tattling within the social context of the preschool (see Chapter 4). The preliminary results from the observational study were used to create designs for experiments with children of a

similar age range (see Chapter 5), which were aimed at investigating causal mechanisms underlying features of children's behavioural reporting that were identified as being important in the course of the observational study. Finally, the descriptive results of the quantitative sampling themselves led to the generation of novel hypotheses to be tested by experimental or cross-cultural research in the future (see Chapter 6 for an early foray into cross-cultural research, in the form of database surveys).

Accordingly, the order in which I introduced these methodologies into the research programme was (a) participant observation as a classroom assistant, to generate hypotheses; followed by (b) quantitative sampling, to generate and test hypotheses; followed in turn by (c) experimentation, to test hypotheses, and (d) database surveys, to test whether the results generalized across cultural settings. Although this was the order in which these techniques were introduced, there was some overlap between them in terms of the periods over which they were carried out. In particular, participant observation was carried out over the whole period of quantitative sampling, in order to gain exposure to children's behaviour over as long a time period as possible.

3. THE BEHAVIOURAL ECOLOGY OF PEER REPORTING IN PRESCHOOL SETTINGS

While working as a participant observer and classroom assistant in two local preschools, with children aged 3 to 4, I also used behavioural ecological methods to carry out quantitative sampling of various aspects of the children's social behaviour.²² These quantitative results are presented before the qualitative results from the participant observation component, which I describe in Chapter 4, "The Social Context and Motivation of Preschool Children's Tattling." Although participant observation was begun before the quantitative sampling—in order to gain understanding of the context of children's behaviour and to work out how to structure data collection around their daily routine—it is preferable for expositional purposes to report the results of the participant observation after the quantitative results. This is because I used quantitative methods to investigate the gross descriptive properties of children's tattling and test hypotheses arising from the literature review, while using qualitative methods to examine more subtle, motivational and contextual issues. The qualitative data will therefore be used to interpret the meaning of the quantitative results, and also to problematize them to a certain extent.

²² The results of this study are presented a little more briefly by Ingram and Bering (in press).

3.1 Research Questions

This was very much an exploratory study, intended to lay the groundwork for further experimental and cross-cultural research. Hence I was interested in a wide range of research questions, including:

1. whether preschool children's reporting of peers' activities predominantly concerned negative behaviour (i.e., whether it mostly consisted of tattling, broadly defined);
2. what sorts of negative behaviour children reported most frequently;
3. how accurate and truthful children were in their reports of peers' behaviour;
4. whether children ever reported transgressions that did not affect them personally;
5. the extent to which children discussed their peers' behaviour with other peers, as well as with adults;
6. how sensitive children were to their audience's knowledge state concerning a particular action by a third party;
7. how often tattling led to punishment for the reported offender, and how often it led to a reprimand for the tattler;
8. whether there was any relationship between the frequency of tattling and position in the dominance hierarchy;
9. whether there were any links between tattling and established forms of indirectly aggressive behaviour;
10. whether tattling was more likely to occur between children who were friends and often engaged in joint play, or between children who generally avoided each other;

11. the extent to which behavioural reporting was modulated by the gender of the children involved;
12. the extent to which behavioural reporting was modulated by the age of the children involved;
13. the extent to which patterns of behavioural reporting varied between the two sites that were studied.

The following subsections will place these questions in the context of the research reviewed in Chapter 2. Ross and den Bak-Lammers's (1998) systematic study of tattling within sibling dyads was particularly useful for generating predictions in many of these areas. Also useful, at a theoretical level, were several evolutionary studies on gossip and on norm violations, since I hypothesized that tattling is a developmental precursor of gossip, which is driven by an innate sensitivity to norm violations.

3.1.1 *Negative Bias*

A large proportion of gossip may consist of discussions of antisocial behaviour (Kniffin & Wilson, 2005; but cf. Dunbar et al., 1997); and children are better at identifying situations where an individual is doing something forbidden than situations where they are doing something unusual (Harris & Núñez, 1996). Certainly, tattling on negative behaviour makes up much of young children's talk about their siblings' actions (Ross & den Bak-Lammers, 1998). I therefore predicted that children in the preschools would be significantly more likely to report negative behaviour by peers than positive or neutral behaviour.

3.1.2 *Topics of Tattling*

I further postulated that preschool children would be particularly concerned with issues like physical aggression and property disputes, rather than more complex conflicts of interest such as disagreements, deception, or breaches of social convention. Again, this is what was found by Ross and den Bak-Lammers (1998). The theoretical motivation for this position came from Nichols's (2004) theory of "sentimental rules," which proposes that norms that produce a strong affective response will appear more salient to children, and are therefore more likely to be internalized by them, than norms that do not produce such a strong affective response.

3.1.3 *Accuracy and Truthfulness*

If gossip is to function as a distributed system of cheater detection, it must be reliable, which means that it should be predominantly truthful (see Richerson et al., 2003). Individuals may be able to manipulate the system by spreading false gossip, but this should be rare: there must be an assumption, within the gossiping population, that most gossip contains at least a kernel of truth. The default truthfulness of gossip would be supported if the equivalent of gossip in children were shown to be largely truthful (as was found by Ross & den Bak-Lammers, 1998). I predicted that truthfulness would be a general feature of young children's communication about the behaviour of others.

3.1.4 *Egocentrism*

Tattling may be adaptive if it helps individuals to secure the punishment of others whom they would find it difficult to punish effectively themselves. Offences against the self are likely to have more severe consequences on an individual's fitness than

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offences against third parties. Moreover, the existence of generalized egocentric biases in children of this age is well established (e.g., Scarlett et al., 1971). Hence I thought that children would be much more likely to tattle on behaviour that affected them directly than on behaviour that affected a third party. There was no relevant data on egocentrism from the literature on tattling that I had reviewed.

3.1.5 *Reporting Peers' Behaviour to Other Peers*

I did not make any specific predictions about the extent to which children would report transgressions to other children. On the one hand, adults would seem to be more capable of punishing children than other children would be, and hence a more attractive recipient for such reports; on the other hand, children at this age are known to intervene regularly in disputes involving their friends (Horowitz, 2005; Singer & de Haan, 2007), and would certainly be capable of meting out their own forms of punishment (though whether adults would approve of this process would be another matter). Indeed, preschool children exhibit well-defined dominance hierarchies (e.g., Strayer & Strayer, 1976), and so the only prediction I made in this area was that if children did report peers' transgressions to other children, the target audience would tend to be more socially dominant than either the reporter or the transgressor.

3.1.6 *Audience Knowledge State*

O'Neill (1996) demonstrated unequivocally that even 2-year-old children are sensitive to their audience's knowledge state when phrasing verbal remarks, such as indicating the location of a toy. However, a construct like *sensitivity to the audience's knowledge state* is perhaps easier to define and measure in an experimental paradigm than in the messier world of naturalistic observation. My way of operationalizing this construct was to predict that children would be less likely to

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mention the perpetrator of a transgression by name—and more likely to use a pronominal form—when the audience was close at hand (i.e., part of their immediate, activity-based sub-group) than when they were in another part of the classroom or playground.

3.1.7 *Punishment*

In Section 2.1.1, I discussed recent theories about the evolution of cooperation, pointing out that effective systems of punishment are needed to encourage cooperation (see especially Fehr & Fischbacher, 2004b), and that punishment is often mediated by gossip and other forms of linguistic reporting (Piazza & Bering, 2008). Accordingly, I predicted that tattling would frequently lead to the audience providing support for the tattler, in the form of punishment for the target of tattling.

3.1.8 *Dominance*

If tattling is an attempt to recruit a stronger individual to deal with a foe whom the tattler would have difficulty punishing alone, then we might expect that weaker (or low-status) individuals, within a particular social context, would tattle more often than stronger (or high-status) individuals. This is supported by the findings that tattling makes up significantly more of the talk of younger siblings than of older siblings (Ross & den Bak-Lammers, 1998), and that lower-ranking adolescents in boys' homes were more likely to tattle on peers (Friman et al., 2004). Dominance hierarchies in preschool contexts are well-defined and empirically tractable (e.g., Strayer & Strayer, 1976). Therefore I tentatively predicted a negative correlation between social dominance and frequency of tattling. This fits in with the social comparison theory of Wert and Salovey (2004), who argued that people tend to gossip more about high-status individuals (cf. McAndrew et al., 2007).

3.1.9 *Relational Aggression*

Since tattling appears to be a stereotypical example of indirect aggression—inflicting harm on others through their relationship with a third party—I predicted that frequency of tattling would correlate closely with established measures of indirect or relational aggression (see Archer & Coyne, 2005; Crick et al., 1997). Children who tattle frequently should be the same individuals who are rated highly by teachers on indirect, relational or social aggression scales.

3.1.10 *Social Closeness*

An interesting, but difficult, question for this research was the extent to which tattling would be affected by the emerging social networks of the preschool children being studied. I predicted that children would be more likely to report those peers to whom they were socially closest (operationalized as those peers with whom they spent the most time playing), simply because there would be more opportunities for them to be affected by norm transgressions and other negative behaviour on the part of those particular peers.

3.1.11 *Gender Effects*

Given the importance of gossip and other forms of linguistic reporting in all human societies, I predicted that both sexes would regularly engage in tattling. If either sex were to engage in it more, I expected it to be girls, since girls may engage in indirect aggression more than boys (Hess & Hagen, 2006; Lagerspetz, Björkqvist, & Peltonen, 1988). I expected boys to report more instances of physical aggression than girls, since boys engage more frequently in rough-and-tumble play (Pellegrini, 2007; Pellegrini & Smith, 1998).

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3.1.12 Age Effects

In line with the results of Ross and den Bak-Lammers (1998) on 2-, 4- and 6-year-old siblings, I predicted that older children in the preschools would carry out slightly more tattling by frequency than younger children, but that tattling would make up a slightly smaller proportion of their total conversations with adults. However, given that the age range of children at the two schools was only about 18 months, and that they were not divided into age-based groups, this effect was not predicted to be large.

3.1.13 Site Effects

Although there were notable cultural differences between the two preschools, which are discussed in Section 4.5, I made no specific predictions concerning differences in tattling between the two schools.

3.2 Methods

Since the research questions that I was trying to answer were quite wide-ranging, it was appropriate to use multiple quantitative methods of investigation (in addition to the qualitative method of participant observation, described in Chapter 4).

3.2.1 Participants

Research was conducted in two inner-city preschools in Belfast, the principal city of Northern Ireland. The first preschool studied (*Preschool A*) was situated in a low-income residential area of Belfast, inhabited overwhelmingly by working-class Catholics. All the children came from Irish families, with the exception of one child who was of mixed Irish/Portuguese parentage. When research began in November 2006, there were 15 children in the preschool (8 boys and 7 girls). Their age at the

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start of the research, which lasted for 3 calendar months, ranged from 3;6 to 4;4 years, $M = 3;11$. In January 2007 they were joined by a girl from the grade below aged 3;1 years, who was present for about half of the study time.

The second preschool studied (*Preschool B*) was situated in a semi-residential area of inner Belfast with a large immigrant population, and was attended by a mixture of children who lived locally and those whose parents worked nearby. Hence the children's cultural backgrounds were more diverse than in Preschool A: the majority came from (Northern) Irish families, but four of the children studied were ethnically Chinese, one was Malaysian, one Nigerian, and one Zimbabwean. In addition, two children were of mixed ethnicity (N. Irish / German and N. Irish / Spanish). The study group comprised 24 children (13 boys and 11 girls). Their age at the start of the study, which lasted for 2 calendar months from April 2007, ranged from 3;2 to 4;8 years, $M = 4;1$.

Informed consent was obtained from the parents or guardians of all children in both schools (see Appendix A). Since I was simultaneously carrying out participant observation, informed assent was not sought from the children: instead, they were informed that I would be working with them for a couple of months as an additional classroom assistant. All names of children appearing in this thesis have been anonymized.

3.2.2 *Event Sampling*

The quantitative method that was used most extensively in this study was the event sampling of children's reports of peers' behaviour. Event sampling was chosen because it is a particularly useful method for evaluating the general descriptive

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properties of everyday experience, and for using these properties to generate hypotheses for further testing (Reis & Gable, 2000).

At Preschool A, I spent a total of 31 hours on event sampling, spread over 15 study days in continuous sessions of between 1 hour and 3 hours in duration. At Preschool B, I engaged in event sampling for 35 hours, over 15 study days. An *event* in this study was defined as *a verbal description by a child of a peer's behaviour*. Every event that I overheard was recorded on paper, as soon as possible after it occurred (usually within 1 minute, and nearly always within 5 minutes). A small number of events in the sessions (< 20 in total) were omitted, either because of partial inaudibility or because I was too busy to record them when they occurred.

For each event, the following information was coded, on pre-formatted coding sheets in my notebook: the *time* at which the event occurred; the child(ren) who made the report (the *tattler*); the child(ren) who performed the reported action (the *miscreant*), and whether they were named explicitly; the person(s) to whom the report was made (the *audience*), and whether they were addressed explicitly; whether the audience was in the same group as the protagonists when the event occurred (which served as a proxy for whether they were likely to have *witnessed* the event); the person most affected by the reported behaviour (the *victim*), which was defined as either the tattler themselves, the audience, a third party, or nobody in particular; the *truth value* of the tattler's account (true, false, or indeterminate); the free-text *content* of the tattler's report (often verbatim); and a free-text description of the audience's *response* to the event.

After data collection, content analysis of the *content* and *response* free-text fields was used to code data using the coding schemes below. For these additional categories, half of the events were rated independently by a fellow graduate student

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who was blind to the observational predictions and was given the definitions below, along with examples similar to those in Appendices Appendix A and Appendix A. Inter-rater reliability for content type was 90%, and for response type it was 89%; Cohen's kappa was .87 and .84, respectively.

Content Type

Reports of peers' behaviour were assigned to one of ten categories (following Ross & den Bak-Lammers, 1998). Reports of *physical aggression* referred to any kind of unwanted physical contact, e.g. hitting or pushing. *Property damage* reports described any kind of damage to property, e.g. breaking a toy, or knocking over some blocks. *Property entitlement* covered reports of someone taking something which belonged to another child, or which another child had been using, as well as children refusing to share objects that they themselves owned or were using. A report of *social convention* referred to a violation of some conventional rule of the classroom, such as standing on a chair, or poor table manners. *Joint play violations* included reports of a child obstructing another child's play, or refusing to play alongside them. Reports of *taunting* referred to one child shouting at another or calling them names. *Deception* reports described another child lying to or otherwise misleading someone. Reports of *disagreement* referred to one child denying something that another child had said or believed in. There were also two categories of reports that did not meet the definition of tattling, since they did not describe negative behaviour. In neutral, or *non-judgemental*, reports the behaviour described was innocent and the child who reported it did not seem to be seeking any punishment. *Positive* reports consisted of an approving description of another child's prosocial behaviour.

Response Type

The actions of the audience in response to a behavioural report were assigned to one of seven categories (again following Ross & den Bak-Lammers, 1998). *Supporting* a tattler involved intervening on his behalf, e.g. by verbally admonishing the miscreant, or compelling her to hand over a toy to another child. *Acknowledging* a report consisted of agreeing or sympathizing with the tattler, but not saying anything to the miscreant about the reported behaviour. *Excusing* an action involved asserting to the tattler that the behaviour reported is innocent or justified. *Ignoring* was coded if the audience did not seem to respond to the tattler in any meaningful way. When *reprimanding* a tattler, the audience reproached the tattler for tattling or for the tattler's own reported behaviour. In some cases, *both tattler and miscreant* were reprimanded, the implication being that they had both been involved in the reported negative activity, and this received its own code. Finally, a *questioning* response took place when the audience tried to find out exactly what had happened by questioning the tattler, the miscreant, or both, but was unable to reach any firm conclusions (so that the response did not resolve into one of the other categories).

3.2.3 Point Sampling of Social Networks

Tattling is not just an individual activity, but a relational activity between tattlers and the peers that they report on. It might therefore be expected to vary according to the social relations between individuals. I built up a picture of the social networks in the two classrooms, and the sociability of individual children, by using point sampling to record the composition of children's play groups during free play sessions (Coolican, 2004, Pellegrini, 2004). In Preschool A, group membership was surveyed at a set time every morning. Several study days were also devoted to point sampling, taking

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a sample every 15 minutes for the duration of the morning. In all, 106 point samples were taken, each of which recorded the group membership of every child present. In the busier environment of Preschool B, point sampling was conducted on a more infrequent and ad hoc basis (18 samples, spread over 9 study days).

3.2.4 *Focal Follows*

In Preschool A, each child was observed individually for one hour. This hour was made up of one 30-minute and two 15-minute sessions per child, carried out on three separate days. Everything that the focal child did during these sessions was noted. The motivation for the focal follows was threefold: firstly, to check that the event sampling of the children's verbal reports was not biased towards the most audible children; secondly, to measure the frequency with which conflicts were reported to adults; and thirdly, to investigate the dominance hierarchy within the classroom.

I used the same coding scheme for analyzing conflicts as for recording the content type of children's verbal reports. Disputes arising from physical aggression, property damage, property entitlement, social convention, joint play violation, taunting, deception and disagreement were all recorded. A common method for analyzing the dominance hierarchies of toddlers is to code for incidences of direct aggression (e.g., Strayer & Strayer, 1976). However, examples of direct aggression become much less frequent by age 4 (Hawley, 1999), and were rarely observed in Preschool A; so instead I analyzed several types of social interaction which included a clear element of direction of one child's behaviour by another (cf. Barner-Barry, 1988; La Freniere & Charlesworth, 1983). Child *X* was considered to have taken part in a dominant interaction with Child *Y* if any one of the following behavioural patterns occurred: (a) *X* initiated physical contact with *Y*, and *Y* did not resist; (b) *X*

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told *Y* to do something, and *Y* complied; (c) *Y* imitated *X*'s behaviour; (d) *Y* followed *X* to another part of the room. In each case, the behaviour of both children was important, emphasizing the point that dominance is a function of dyadic relations, rather than of individual behaviour alone (Strayer & Strayer, 1976). However, for many dyads there were no examples of such interactions, and so it was impossible to construct a single transitive hierarchy that included all the children. Therefore the ratio of total dominant to submissive interactions for each child was used as an index of relative dominance. The dominance hierarchy constructed using this measure was in accordance with the transitive sub-hierarchies that were constructed based on interactions between specific dyads, and with qualitative observations and informal teacher reports of children's relative dominance.

3.2.5 *Teacher Ratings of Relational Aggression*

Due to time constraints and the larger class size, and because I had some confidence from the first preschool that the event sampling procedure would not underestimate the level of tattling, no focal follows were carried out in Preschool B. Instead, I administered the relational aggression factor of the Preschool Social Behavior Scale—Teacher form (PSBS-T; Crick et al., 1997) to the teacher and classroom assistant in Preschool B, to find out if there was a link between tattling and relational aggression. As mentioned in the introduction, gossip and other forms of evaluative talk have been analyzed as instances of the theoretical construct of relational aggression, defined as “harming others through purposeful manipulation and damage of their peer relationships” (Crick & Grotpeter, 1995, p. 711). The relational aggression factor of the PSBS-T consists of six descriptions of children's characteristic behaviour (e.g., “Tells others not to play with or be a peer's friend”),

on which each child was rated using a 5-point Likert scale. Crick and colleagues (1997) demonstrated that this factor was internally consistent and independent of the overt aggression, prosocial behaviour, and depressed affect factors. In addition, McEvoy, Estrem, Rodriguez, and Olson (2003) found strong inter-method agreement between teacher ratings on the PSBS-T, peer nominations, and direct observations of relationally aggressive activity in the preschool.

3.3 Results

3.3.1 Negative Bias

Children's tattling, defined as the reporting of negative behaviour, was far more frequent than the reporting of positive or neutral behaviour. Event sampling recorded 354 examples (93.1%) of tattling, $M = 1.26$ reports per child per day attended, $SD = 1.12$; 25 examples (6.6%) of non-judgemental talk, $M = .09$, $SD = .14$; and just one example (.3%) of positive talk about a peer's activities. The range of behavioural reporting was 0 to 6.31 events per child per day attended.

Tattling might be expected to be more noticeable, and thus more readily observable, than other forms of talk about peers. However, a similar effect was observed in the data from the focal follows, where it would have been difficult to miss any kind of behavioural report about a third party made by the focal child. Out of 32 instances in the focal follow data where the focal child was involved in a behaviour reporting event, only 2 reports (6.3%) were non-judgemental, and none were positive.

3.3.2 Topics of Tattling

Examples of actual tattling content are listed in Appendix A. No examples were found of children reporting one of the pre-defined categories of tattling content (*deception*). For the other seven categories, mean proportions of children's tattling are shown in Table 1, ordered by overall frequency.

Table 1. Proportions of Reported Categories of Negative Behaviour

	Preschool A	Preschool B	Total
	Mean (SD)	Mean (SD)	Mean (SD)
Property entitlement	.45 (.30)	.27 (.24)	.34 (.27)
Physical aggression	.16 (.15)	.32 (.24)	.26 (.22)
Social convention	.19 (.16)	.10 (.15)	.14 (.16)
Joint play	.03 (.06)	.18 (.23)	.12 (.20)
Taunting	.05 (.09)	.08 (.10)	.07 (.10)
Property damage	.11 (.15)	.04 (.11)	.06 (.13)
Disagreement	.01 (.03)	.00 (.01)	.01 (.02)

3.3.3 Accuracy and Truthfulness

In event samples where it was possible to determine unambiguously the truth of a behavioural report, an average of 90.0% of reports per child were found to be true. However in 43.1% of event samples (averaged across all participants), the truth value of the report could not be determined. This was partly because the busy nature of the classroom environment often made it difficult to determine all the relevant antecedents of the children's disputes, and partly because some reports (e.g., "He's

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not listening to me!”) were difficult to assign objective truth values to without intensive questioning of the children involved. In the focal follow data, where it was much easier to determine the truth of children’s claims, only 9 reports out of 32 (28.1%) were of indeterminate truth value, and no false reports were recorded.

In the majority of indeterminate cases, it is unlikely that the reports were false, since the alleged miscreants rarely denied their offences, and the teachers rarely accused tattlers of lying. Moreover, the proportions of *deceptive* reports in our study were well below the 10% of *false* reports that were recorded. For example, Child *B* might crash into Child *A* on a tricycle, and Child *A* might falsely report to the teacher that Child *C* had crashed into him. This might be an error in face recognition, or a slip of the tongue; there were very few events in which I suspected that deliberate fabrication of a report was occurring. Mistaken ascriptions of intention—e.g. “She pushed me,” when one child had accidentally knocked into another—were more common.

3.3.4 Egocentrism

Tattling was quite self-centred, tending to focus on achieving help or punishment for something that had happened to the tattler, mean share = .77, *SD* = .24. Tattling on behalf of third parties was quite rare, mean share = .06, *SD* = .11; and reporting a transgression which directly affected the audience was more unusual still, mean share = .01, *SD* = .02. Tattling where there was no clear victim, as with most breaches of social convention, was more common, mean share = .16, *SD* = .17.

3.3.5 Reporting Behaviour to Peers

Reporting a child’s behaviour to another peer was quite rare in the event samples, occurring in only 4 out of 363 events (1.1%). It is possible that the frequency of

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reporting to peers was underestimated by the event sampling method, since reporting to adults is likely to be more noticeable. Reporting to peers was slightly more common in the focal follow data, where it accounted for 1 out of 32 events (3.1%).²³ However, the much smaller sample size for the focal follows means that this difference is rather unreliable. In any case, it is clear that reporting to peers was much less frequent than reporting to adults, even when measured using a technique that was sensitive to most of the statements made by the focal child.

3.3.6 Audience Knowledge State

Children's behavioural reports were quite evenly split according to whether the target of the report (the *miscreant*) was mentioned by name: in 51.3% of the 269 events for which this property was recorded,²⁴ the miscreant was explicitly named, while in the remaining 48.7% of events the miscreant was implied, typically through use of the pronominal form *he* or *she*, or by pointing. Using the presence of the audience in the same sub-grouping within the classroom as a proxy for whether they had witnessed the reported behaviour, it was found that the tattler reported the miscreant by name in 59.2% of events when the audience was not present in the same sub-group, but in only 28.1% of events when the audience was present. A chi-squared test revealed that this difference was highly significant, $\chi^2 = 18.8$, $p = .00001$.

²³ One other report was made to a child of nine or ten years who was present in the room for a short while, and who was related to one of the classroom assistants. His position could thus be argued to be intermediate between peer and staff member, and indeed the children seemed to treat him in an intermediate way.

²⁴ This property was not recorded during the first four days of event sampling, as the hypothesis that it was used to investigate had not been developed. Nor was it always possible (due to inaudibility) to record whether a target had been mentioned by name at other times.

3.3.7 Audience Responses to Tattling

Table 2 shows the mean shares of the various types of response to tattling, ordered by overall frequency. The most common response was supporting the tattler, which accounted for around 50% of responses. If acknowledging is included as a positive response for the tattler, since it constitutes positive attention from an authority figure, almost 70% of responses were favourable from the tattler's point of view.

Table 2. Proportions of Audience Responses to Tattling

	Preschool A	Preschool B	Total
	Mean (SD)	Mean (SD)	Mean (SD)
Supporting	.52 (.27)	.44 (.19)	.47 (.23)
Acknowledging	.17 (.27)	.25 (.24)	.22 (.25)
Excusing	.08 (.09)	.12 (.13)	.11 (.11)
Ignoring	.14 (.17)	.07 (.09)	.10 (.13)
Reprimanding	.03 (.05)	.03 (.09)	.03 (.08)
Both reprimanded	.04 (.13)	.02 (.04)	.03 (.09)
Questioning	.12 (.26)	.13 (0.13)	.12 (.19)

3.3.8 Dominance

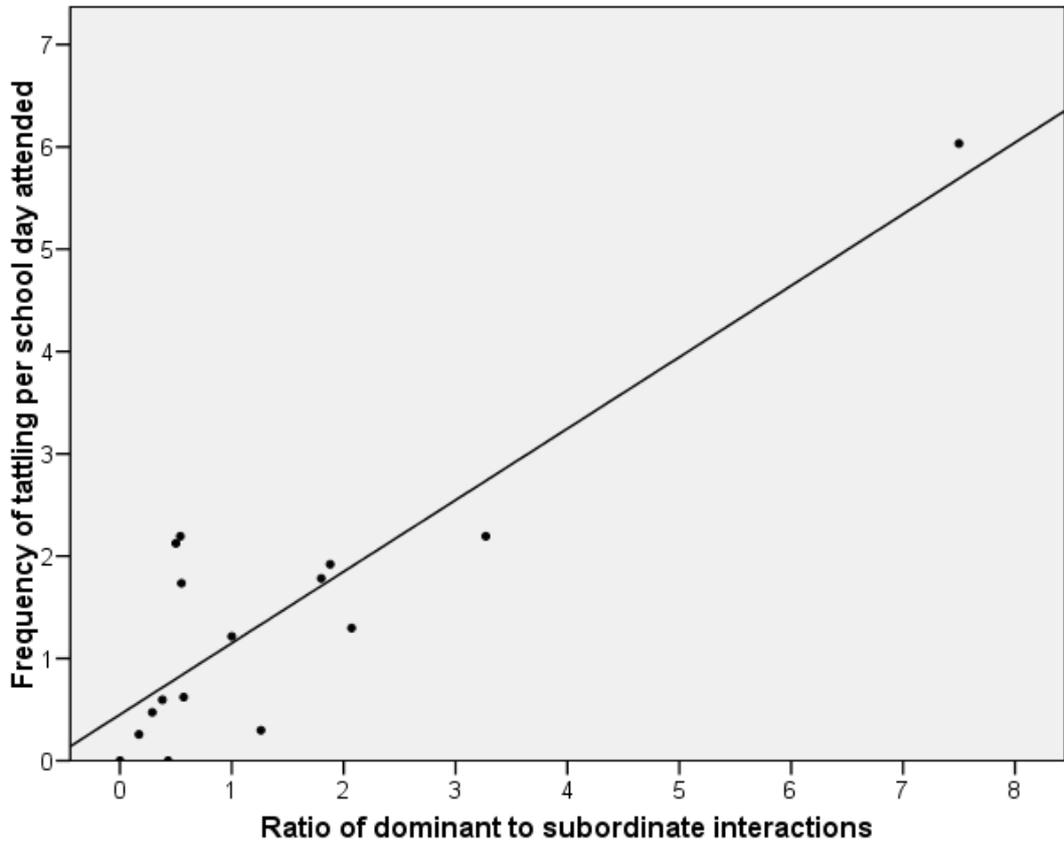
In Preschool A there was a strong positive correlation between children's dominance, as measured by the ratio of their dominant to subordinate interactions, and the rate at which they tattled on other children, $r = .881$, $n = 16$, $p < .001$. That is, dominant children reported others' transgressions significantly more than subordinate children (see Figure 1 below). Since a negative correlation between

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dominance and tattling frequency had been predicted, this result warranted further investigation.

The relationship was still significant, though less so, if the outlier at the top right of Figure 1 (a highly dominant girl, Caoimhe, who tattled much more frequently than any other individual in either preschool) was excluded. A more general explanation for this pattern would be that children who talked to the teacher more often might have been more likely to engage in tattling. However, there were no correlations between overall rates of addressing an adult in the classroom, as recorded in the focal follows, and either rates of tattling or ratio of dominant to subordinate interactions, both $r < .25$, both $p > .3$. Alternatively, sociability might be expected to increase tattling on the part of dominant children, since more social interactions might lead to more potential for conflicts, and therefore more opportunities to report those conflicts. Since the average number of play partners for a given child would be affected by total attendance on the days that he or she was present, I calculated an index of sociability for each child, based on the ratio between the actual number of interactions with every other child and the potential number of interactions that could have taken place (i.e., the number of point samples at which both children were present). There was no correlation between this sociability index and either the frequency of children's tattling or the ratio of dominant to subordinate interactions, both $r < .3$, both $p > .3$. Therefore, there seemed to be a specific link between dominance and tattling, at least in this preschool.

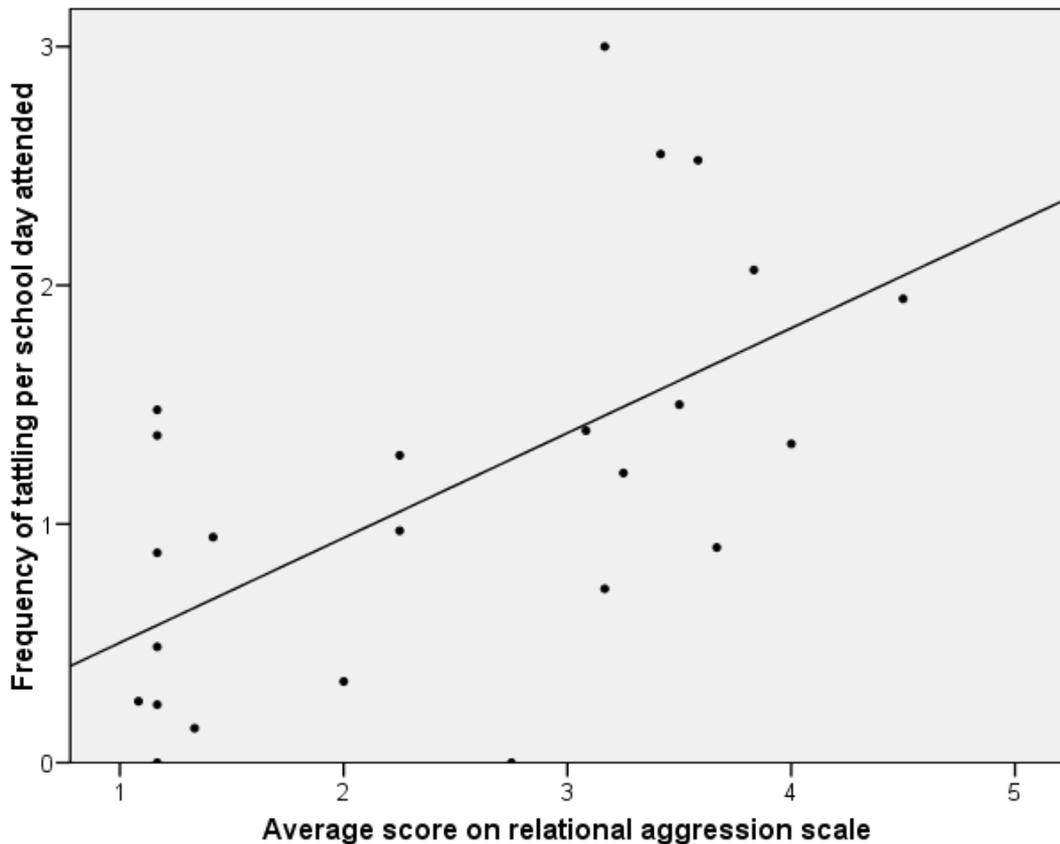
Figure 1. Relationship, $r^2 = .77$, between children's dominance, as measured by the ratio of dominant to subordinate interactions in which they participated, and tattling frequency (adjusted for attendance) in Preschool A.



3.3.9 Relational Aggression

In Preschool B there was a strong correlation between tattling frequency and a child's score on the relational aggression section of the PSBS-T teacher-rated questionnaire, $r = .59$, $n = 24$, $p = .002$. Highly significant individual non-parametric correlations were also obtained for all six of the items on the PSBS-T scale, all $r \geq .50$, all $p \leq .01$. The closest correlation was with the item, "Tells others not to play with or be a child's friend," $r = .66$, $p = .0005$. This demonstrates that tattling co-varies with more traditional verbal indices of relational aggression (see Figure 2 below).

Figure 2. Relationship, $r^2 = .36$, between children's relational aggression, as measured by teacher ratings on the PSBS-T scale, and tattling frequency (adjusted for attendance) in Preschool B.



3.3.10 Social Closeness

The social interaction index described in Section 0 was used to investigate the effect of social closeness on tattling frequency. For each dyad in Preschool A,²⁵ I first calculated the ratio between the number of point samples at which both children were found to be in the same group and the number of samples for which both were present at school. I then carried out a bivariate correlation between this ratio and the proportion of each child's tattling that took place within each dyad. There was a very

²⁵ There was not enough data from the point sampling to complete this analysis for Preschool B.

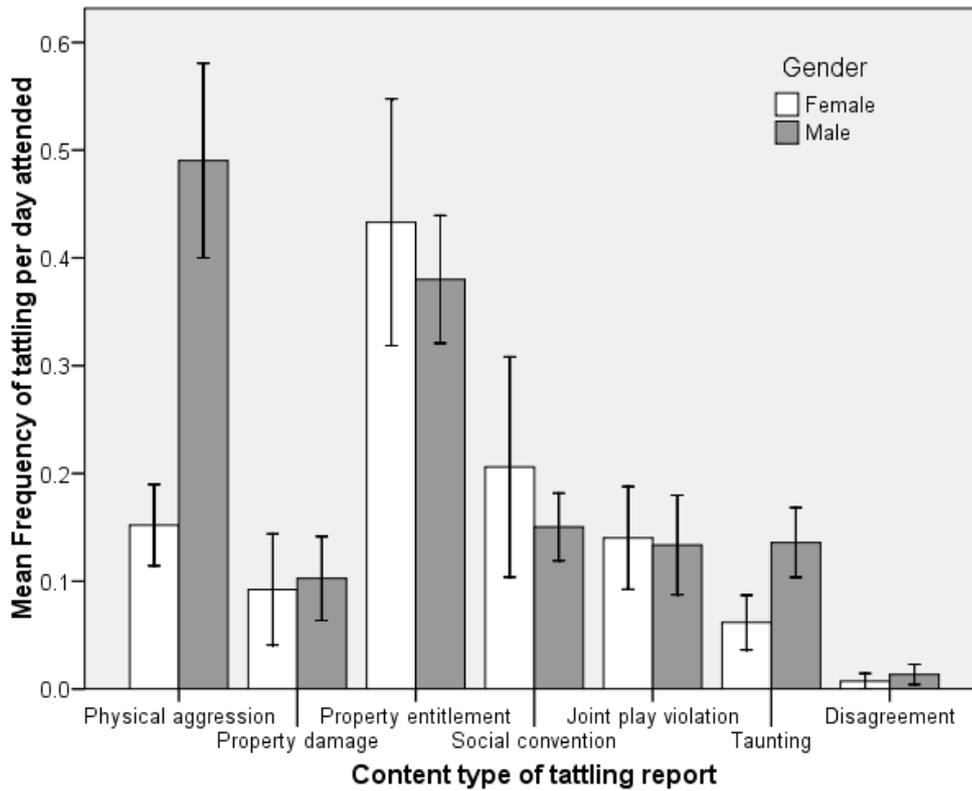
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significant, though not particularly strong, correlation between the social closeness ratio with each dyad partner and the percentage of tattling performed on that child, $r = .335$, $p = .000001$, $n = 240$. This showed that, as predicted, children were somewhat more likely to report the behaviour of those peers with whom they interacted more frequently.

3.3.11 Gender Effects

No effects of tattler gender were found on overall frequency of behavioural reports, proportion of negative reports, egocentrism, or dominance, all $p > .3$. Girls' behavioural reports were slightly more truthful than boys' reports, but both were highly truthful, $M = .98$, $SD = .05$, $n = 19$ for girls; $M = .84$, $SD = .26$, $n = 21$ for boys; and this effect was not significant, $t = 2.36$, $p = .029$, $n = 34$, given the number of potential gender effects that were tested, Bonferroni $\alpha = 0.0025$. However, even at this reduced significance level, the boys, $M = 3.21$, $SD = .88$, $n = 13$, in Preschool B were far more likely than the girls, $M = 1.60$, $SD = .72$, $n = 11$, to be seen by the teacher as relationally aggressive, $t = 4.84$, $p = .00008$. Since there was no difference in the overall tattling rates between genders, $t = 0.882$, $p = .383$, it was possible to directly compare the frequencies of girls' and boys' reporting of the various categories of norm violation (see Figure 3 below). The only significant difference was in tattling on physical aggression, which boys, $M = .49$ per day, $SD = .41$, $n = 21$, reported more often than girls, $M = .15$ per day, $SD = .16$, $n = 19$; $t = 3.46$, $p = .002$. There was no significant effect of tattler gender on the frequency of any of the various types of response to tattling, all $p \geq .15$.

Figure 3. Differing mean frequencies of reporting (adjusted for attendance) by boys and girls in both preschools on the various categories of transgression. Error bars represent $\pm 1 SE$.



3.3.12 Age Effects

To test for age effects, a series of bivariate correlations were run between the children's ages at the start of the study and various properties that were measured in the study. A non-parametric correlation (Spearman's rho) was used due to the narrow range of ages in the study, compared to the wide ranges within the variables being measured. The 15 variables tested included the frequency of behavioural reports made by each child per (adjusted) school day; the frequency of behavioural reports made about each child per school day; the proportions of reports made by each child that were negative, true, egocentric (i.e., in which the tattler himself was the object of the reported action), and which did not explicitly name another child;

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the frequency of reports made by each child concerning physical aggression, property disputes, and social conventional violations; the proportions of supporting, acknowledging, excusing, ignoring and questioning responses from the audience; and each child's score on the PSBS-T relational aggression subscale. Of these, the only variable to show a significant relationship with the child's age was the overall frequency of behavioural reports, $\rho = -.40$, $p = .027$. However, this relationship did not approach significance at the Bonferroni adjusted alpha level of .0033.

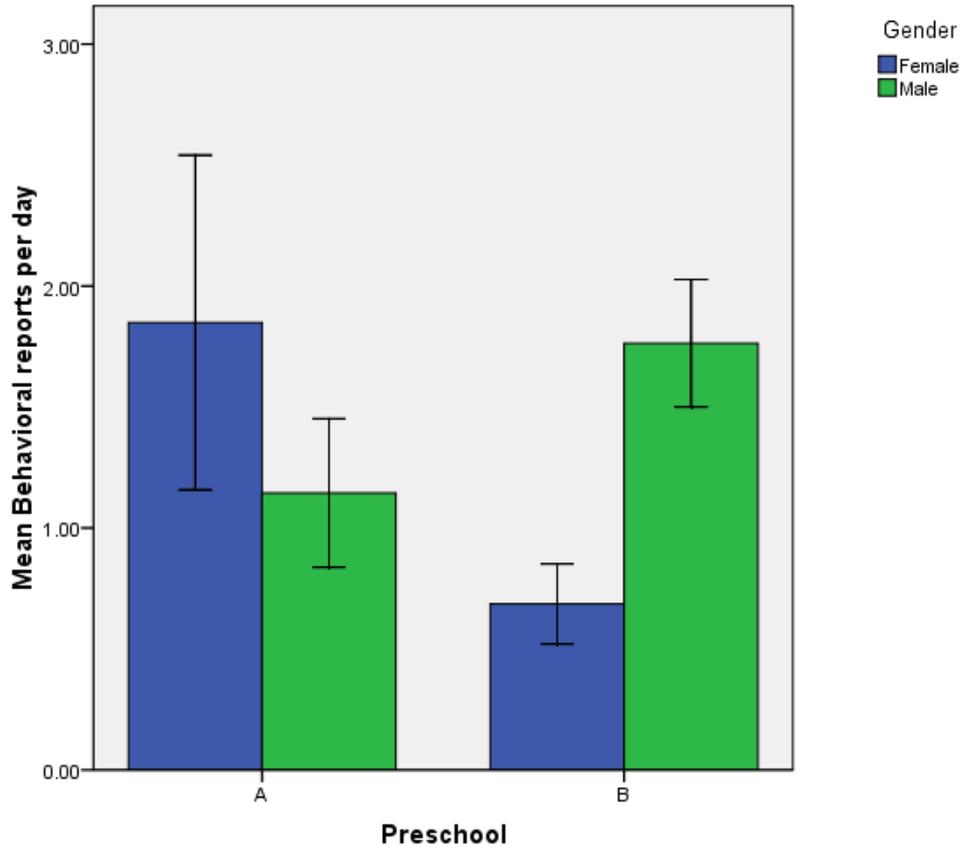
3.3.13 Site Effects

To check for site effects between the two preschools, a series of between-groups *t*-tests were run on variables measured by this study. The 14 variables tested included the frequency of behavioural reports made by each child per (adjusted) school day; the frequency of behavioural reports made about each child per school day; the proportions of reports made by each child that were negative, true, egocentric (i.e., in which the tattler himself was the object of the reported action), and which did not explicitly name another child; the frequency of reports made by each child concerning physical aggression, property disputes, and social conventional violations; and the proportions of supporting, acknowledging, excusing, ignoring and questioning responses from the audience. Of these, the only variable to approach a significant difference between the two preschools was the frequency of reports of social conventional violations, $t = 1.86$, $p = .081$: the mean frequency of reports of social conventional violations in Preschool A (0.31 per day) was much higher than in Preschool B (0.09 per day). However, given the number of variables that were tested for site effects, the Bonferroni adjusted alpha value was .0036, far below the *p*-value for this variable.

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Given certain striking differences in the patterns of gendered behaviour that were observed between the preschools during the participant observation phase (see Section 4.5.2 below for more details), I carried out a planned 2 x 2 ANOVA to find out if there were any differences in the rates of behavioural reporting by gender across the two schools. As described above, there was no main effect of either gender or site on rates of reporting, both $F < 0.6$, both $p > .45$; yet there was a significant interaction between gender and site, $F = 6.0$, $p = .020$. The partial η^2 value for this analysis was .15, which represents quite a strong effect. As shown in Figure 4 below, both boys and girls contributed to this effect, with girls reporting peers' behaviour more than boys in Preschool A, but less than boys in Preschool B.

Figure 4. Differing mean rates of behavioural reporting (per standardized school day) between genders across the two preschools. Error bars represent $\pm 1 SE$.



3.4 Discussion

The observational data suggest that the reporting of peers' negative behaviour was an important form of social communication for these preschool children. While not dominating their talk with the adults who worked with them—taking place on average only once or twice per school day—tattling was practiced quite regularly by most children, and often had profound social consequences in terms of punishment of the child whose behaviour was reported. In the next few sections, I discuss how these observational data can help us answer the research questions set out in Section 3.1 above.

3.4.1 *Negative Bias*

The great majority of children's talk about their peers' behaviour took the form of descriptions of negative behaviour. This is a robust finding that held across both sexes in both preschools, and also in the focal follow data, for which the tractability of tattling was less of an issue. Moreover our data reiterate the findings of a bias towards talk about negative behaviour among all four groups of siblings studied by Ross and den Bak-Lammers (1998). Taken together, these two studies demonstrate that—while not necessarily universal—a bias towards reporting negative behaviour is present in children of various ages in differing social contexts. It seems that when children first start talking to others about what a third party has done, they use this faculty largely to report behaviour of which they disapprove. The roots of this bias may lie in an ontogenetic adaptation (Bjorklund & Pellegrini, 2000) for children to seek aid or sympathy from adults when suffering a negative affective response. This idea is supported by the work of Peggy Miller and Linda Sperry (1988), who found that 2-year-olds' stories told to parents about past events were highly evaluative, and that 64% of stories were concerned with negative experiences. A bias towards discussing negative events with adults may not be specific to communication about social activities, then, but may be a general feature of children's discourse. However, the extent to which this bias is recruited in everyday life, and the precise kinds of events that are reported, are likely to be affected by local cultural norms of discourse (Burger & Miller, 1999; P. J. Miller, Cho, & Bracey, 2005).

3.4.2 *Topics of Tattling*

What types of behaviour did preschool children most often report? I found that children were much more likely to report disputes arising from issues of property

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entitlement or physical aggression than they were to report joint play disputes, taunting, property damage, simple disagreements, or deception. Again, this is consistent with the findings of Ross and den Bak-Lammers (1998); see Table 3 below.

Table 3. Comparison of the Proportions of Reporting of Various Norm Violations for Preschoolers and Siblings

Transgression type	Preschool children (aged 3–4)	4-year-olds on younger siblings ^a	4-year-olds on older siblings ^b
Property entitlement	.34 ^c	.24	.21
Physical aggression	.26	.15	.25
Social convention	.14	.13	.11
Joint play	.12	.10	.10
Taunting	.07	.08	.10
Property damage	.06	.24	.10
Disagreement	.01	.04	.07
Deception	.00	.02	.02

^a Data from den Bak and Ross (1996).

^b Data from Ross and den Bak-Lammers (1998).

^c All figures are mean shares for individual children.

The proportions of the various categories are remarkably similar, especially when preschoolers are compared with the 4-year-olds at Time 2 in Ross and den Bak-Lammers’s study (i.e., the group of younger siblings tattling on older siblings). Tattling on younger (2-year-old) siblings seems slightly anomalous compared to the other two groups, in that it is characterized by low rates of tattling on physical

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aggression, but high rates of tattling on property damage. This may be because toddlers do not present much a physical threat to their older siblings; but on the other hand they might be more likely to accidentally wreck some configuration of toys, which the older siblings may then seek adult help to repair. The high proportion of property disputes in preschool children's tattling, compared to siblings' tattling, may reflect greater competition over access to toys in the preschool setting, due to the higher density of children in the available space. The higher rates of tattling on disagreements between siblings are harder to explain, but perhaps indicate that young children are more concerned with reaching agreement with their siblings—and having this agreement validated by a parent—than with unrelated peers.

The preponderance of tattling on physical aggression and property disputes, which result in direct harm to the victim, is in line with the findings of Nucci and Turiel (1978), who showed that preschool children were more likely to protest about moral (harm-related) than conventional violations in a classroom setting. It is also noteworthy that events involving physical harm frequently appear in 2-year-olds' stories about the past (P. J. Miller & Sperry, 1988). It seems that children are particularly prone to use tattling to report breaches of "affect-backed" norms (see Nichols, 2004), involving direct physical harm or property loss. However, they do generalize this form of communication to breaches of other social norms, and probably more so as they get older (Ross & den Bak-Lammers, 1998).

3.4.3 *Accuracy and Truthfulness*

Regardless of content, the great majority (90%) of children's reports about peers' behaviour were true, at least for cases in which truth could be easily determined. This figure is similar to Ross and den Bak-Lammers's (1998) finding of a mean of

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94.3% truthful reports across all four groups that they studied. Moreover, most false reports seemed to be mistaken rather than fabricated. This bias towards truthful communication is interesting because children of this age (and younger) are certainly capable of lying (for a review, see Lee & Talwar, 2008). Two-year-olds have been observed to engage in frequent acts of social deception and pretence (Newton et al., 2000), and active lying by 3-year-olds has been demonstrated in many experimental studies (e.g., Lewis et al., 1989). Indeed, children in the present study were observed to lie in response to tattling, usually by means of a simple denial such as “No I didn’t!” Since strategic deception requires a high level of executive control (Hala & Russell, 2001), it may be that by this stage of development children’s executive competence enables them to make false denials of responsibility, but not yet to fabricate complex narratives that might successfully absolve them of responsibility.

The default position of honesty in children’s tattling has interesting implications for the evolution of cooperative behaviour, because (as Richerson et al., 2003, argued) relying on gossip to enforce cooperation by spreading information about norm violations creates the second-order problem of how to check that this information is accurate. How do we know that our informants are telling the truth, rather than indulging in dishonest “cheap talk” for spiteful, boastful, or idle reasons? The fact that young children hardly ever fabricate stories about their peers’ activities suggests that such fabrication is a skilled social cognitive activity that takes time and effort to master. If fabricating false reports is so difficult, then perhaps the assumption that most gossip is honest (or at least that “there’s no smoke without fire”) is a useful evolutionary heuristic—especially if there are disproportionate costs in disbelieving true gossip versus believing false gossip.

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In addition to the proximate causes for the lack of deceptive tattling by children, it is tempting to postulate an ultimate cause. In small-scale societies, young children mainly communicate with members of their kin group, and this presumably reflects conditions in the ancestral evolutionary environment.²⁶ The early preponderance of communication within the kin group means that there are few conflicts of interest between tattlers and their audience. As Alexander (1987, pp. 73–75) notes, a high frequency of deception is expected in any communication where there are significant conflicts of interest between the communicative partners (such as mimics deceiving predators; see Dawkins & Krebs, 1978). Congruence of interests is easy to understand in the case of siblings tattling to parents, who are naturally interested in making sure that neither sibling is unfairly exploited by the other, because they have a huge amount of resources invested in both. Since young children are not prepared by evolution for life in the institutional environment of the preschool, it is possible that they treat staff at the preschool as surrogate parents, or at least as senior members of their kin group. Very young children use language not primarily to communicate useful information to arbitrary others within the social group, but far more often to communicate their own needs and desires to adults who care for them (this is also reflected in the egocentric nature of tattling, discussed below). It would make little sense for children to lie in these circumstances: doing so could lead to a *cry wolf* effect, in which a tattler is ignored just when they really need help. For language to be adaptive for a young child, it has to be an honest signal of need.

²⁶ See Fitch (2005) for a theory of the evolution of language through kin selection.

3.4.4 *Egocentrism*

Children were more inclined to tattle on those who had harmed or offended them directly. At a pragmatic level, this finding may reflect a general egocentric bias in children's discourse (K. H. Rubin, 1973). At a motivational level, it may also reflect a greater incentive to punish peers who have harmed the tattler, rather than those who have harmed a third party. Nevertheless, children as young as two are capable of sociocentric speech (e.g., Bruner, 1983), and it is central to evolutionary models of punishment that individuals should sometimes extend punishment to actions of which a third party, or perhaps the group as a whole—in the case of violations of social convention—is the victim (Fehr & Fischbacher, 2004b). Indeed, it is interesting that children reported social conventional violations much more frequently than transgressions against a third party. Perhaps in some way the former class of reports may be more important for promoting group cohesion, because it is the group who suffers instead of any one individual (compare the concept of “group-serving gossip” espoused by D. S. Wilson et al., 2000, and discussed on p. 11 of my literature review). This pattern could also be indicative of a certain level of social cognitive awareness, in that children might expect third-party victims to deal with their own problems. Children's egocentric bias towards reporting transgressions of which they themselves are the victims was only a tendency, then, but one which may reflect language's ontogenetic adaptive value for young children as a means of seeking aid from adults.

3.4.5 *Reporting Behaviour to Peers*

Children rarely reported peers' behaviour to other peers. This reinforces the point that early forms of discussion of others' activities are dominated by requests for aid.

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Since adults are the main sources of authority within a preschool classroom, it makes sense to direct such requests to those who can deal with them most effectively. Interestingly, Killen and Turiel (1991) found that children are often able to resolve conflicts on their own even when adults do not intervene. Reporting transgressions to adults may not be done out of necessity, then, but may represent the use of adults as a strategic resource to bring about a particular social outcome.

3.4.6 Audience Knowledge State

Children were much less likely to mention a peer by name when their audience was close at hand (e.g., sitting at the same table in the classroom). This is not surprising, given that children as young as 2 have been shown to be sensitive to their audience's knowledge state (O'Neill, 1996). Here children were demonstrating the use of Grice's (1989) conversational maxim of quantity: they used the pronominal form when it was clear who the subject of their discourse was, thus providing no more information than was required to determine identity, but used a child's name to provide more information when the reference of the subject might have been less obvious.

3.4.7 Audience Responses to Tattling

Tattling frequently led to a teacher or classroom assistant intervening in support of the tattler—whether by punishing the reported miscreant, or by resolving a dispute in favour of the tattler. There would seem to be little risk involved in tattling, in that few tattling events led to a negative response for the tattler (this also tends to be true of the family context; Ross & den Bak-Lammers, 1998). Furthermore (as will be discussed in more detail in Chapter 4), qualitative observations showed that while an explicit threat of tattling sometimes deterred peers from carrying out an undesired

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activity, tattling rarely led to aggressive retaliation on the part of peers (except in the form of counter-tattling). Tattling can therefore be a useful social strategy for young children to follow if they are seeking punishment for a perceived wrong. As a social animal which engages in many repeated reciprocal interactions, it makes sense for humans to be equipped with a “punitive sentiment” for retaliating against those who have harmed or exploited them (M. E. Price, Cosmides, & Tooby, 2002). Lacking the ability to punish others effectively themselves, it may be ontogenetically adaptive for young children to express their punitive sentiment indirectly, through the verbal reporting of wrongdoers to those who can punish them.

3.4.8 *Dominance*

Although I had tentatively predicted that most tattling would be done by submissive individuals who were not capable of resolving disputes by themselves, I found that dominant individuals in the first preschool in fact tattled significantly more frequently than other children. Furthermore, this relationship was not reducible either to dominant children being more sociable, or to them talking to teachers more often. Tattling is sometimes a response to a (perceived) aggressive action by another individual, and this may mean that it is practiced more by dominant children, who are more likely to retaliate against peers’ aggression (Strayer & Strayer, 1976). In an environment where children’s physical aggression is frequently punished by adults, dominant individuals’ retaliatory impulses may be socialized and directed into indirect, verbal behaviour (see Cooney et al., 1996; Hawley, 1999). Tattling may be one of several interpersonal strategies—including relationally aggressive behaviour such as saying “I’m not your friend,” verbally aggressive behaviour such as threats and taunts, and direct physical aggression such as pushing—which some preschool

children use, in varying proportions, to achieve social dominance. While I found that dominant children were no more likely than other children to address the teachers in general terms, it could also be that dominant children were less shy about the particular activity of externalizing social problems and drawing them to the attention of an adult. These possibilities are not mutually exclusive: that is, externalizing skills may contribute to dominance in young children (in line with recent research indicating that aggressive, dominant children can have higher levels of social competence in general; e.g., Vaughn & Santos, 2007).

3.4.9 *Relational Aggression*

The results of the PSBS-T questionnaire administered in Preschool B suggest that there are links between tattling and relational aggression. The same children who often engaged in relationally aggressive activities, such as telling peers that they wouldn't be their friend,²⁷ tended to tattle the most frequently. Is tattling a form of relational aggression? This is a possibility, but relational aggression has been defined as behaviour that “harms others through damage to their peer relationships (e.g., using social exclusion or rumor spreading as a form of retaliation)” (Crick et al., 1997, p. 579). Relational aggression is often also characterized as covert (Archer & Coyne, 2005)—for example, whispering behind someone's back—whereas tattling in these two preschools was overt and unashamed, often taking place right in front of the tattling target. Since it is often overt, tattling may be more closely related to social aggression, a construct defined to include both covert and overt forms of

²⁷ The especially close correlation between tattling and this particular item on the PSBS-T scale may reflect the link between tattling and punishment-by-ostracism, which was often imposed (in a mild form, such as making children stand against the wall) on miscreants whose transgressions were reported to teachers.

non-physical aggression (Archer & Coyne, 2005; Galen & Underwood, 1997). Moreover, it is unlikely that children who tattled always intended to *harm* the tattling targets. Sometimes, they may well have been motivated by a desire to win praise from the teacher or—as a form of restorative justice—to correct some inequity in the classroom. Children’s motivations for tattling will be investigated further in Chapter 4.

3.4.10 Social Closeness

Not surprisingly, children were more likely to report the behaviour of those peers with whom they interacted more frequently. However, while it was highly significant due to the large number of potential dyads in the classroom, this effect was rather weak, emphasizing that tattling is likely to be a complex interpersonal behaviour with a wide variety of influencing variables (for example, some close dyads may be marked by quite a turbulent relationship, whereas others enjoy a peaceful relationship). Unfortunately, there were not enough transgressions recorded for each dyad in the focal follows to ascertain whether children were more or less likely to report the behaviour of those they were close to when controlling for the frequency of transgressions for which one member of the dyad was the perpetrator and the other was the victim. This kind of question could perhaps be answered by future research using video observations.

3.4.11 Gender Effects

The result that girls in Preschool B were much more likely than boys to be rated by the teachers as relationally aggressive contrasts with the finding of Crick and colleagues (1997) that teachers tended to rate preschool girls as more relationally aggressive than boys (boys in their study were more likely than girls to be rated as

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overtly aggressive). The lack of relational aggression among the girls in Preschool B may be because the female peer culture there was generally quite submissive and peaceful, as discussed in Section 4.5.2 (see also the discussion of site differences in Section 3.4.13 below). Girls across both preschools were less likely than boys to report instances of physical aggression. This is not surprising given that preschool boys engage in more rough-and-tumble play than girls (Pellegrini, 1987, 2007; Pellegrini & Smith, 1998), as well as being more overtly aggressive (Crick et al., 1997), and therefore have more opportunities to suffer accidental or intentional physical harm at the hands of other boys. Unfortunately, there were not enough instances of physical aggression recorded in the focal follows to ascertain whether girls or boys were more likely to report this category of transgression when the frequency of physical aggression suffered by each individual was controlled for. Again, systematic and sustained video observations might be useful for answering this question.

3.4.12 *Age Effects*

The negative relationship between age and frequency of reporting peers' behaviour is surprising, because Ross and den Bak-Lammers (1998) found that older children tattled more frequently, in absolute terms, than their younger siblings—even though it made up a smaller proportion of their talk to adults. The effect in the present study was quite weak, given the number of possible age effects that were tested for, and both the sample size and the overall age range were small. Therefore the most likely interpretation is that this age effect is simply a statistical artefact.

3.4.13 *Site Effects*

The finding that children in Preschool B were more likely than children in Preschool A to report social conventional violations is also rather weak, given the number of possible site effects that were tested for, and may be another statistical artefact. However, one plausible alternative explanation is that a greater number of arbitrary, conventional rules were needed in Preschool B, because of the larger class size. Qualitative observations indicated that staff in Preschool B made much more extensive use of relatively formal punishments such as making a child stand in a corner, rather than simply admonishing a child or intervening to resolve a dispute. Possibly this was because, with a lower adult/child ratio, disputes tended to become more serious, and therefore more requiring of formal punishment, before an adult could intervene. A similar mechanism may have led to more frequent appeals to social conventions on the part of the children.

The gender dynamics of tattling seemed to vary between the two preschools, with girls doing more of it than boys in Preschool A, but the reverse pattern holding for Preschool B. This may partly be explained by differences in the ways that girls behaved across the two schools, stemming ultimately from the greater cultural heterogeneity of the female peer group in Preschool B (see Section 4.5.2 below for more extensive discussion of this point). However, this does not explain the slightly depressed rate of tattling for boys in Preschool A, which also contributed to this gender/site interaction. It is likely that, as with many behavioural traits in preschools, the gender dynamics of tattling is highly sensitive to a large number of features in the local social and cultural context (see MacNaughton, 2000). This certainly seems to be the case for gender effects in indirect aggression, where no real consensus has been reached: some studies have found that girls practise indirect aggression (and

related forms of behaviour) more than boys, whereas others have found that boys practise it just as much as girls (see reviews in Archer & Coyne, 2005; Underwood et al., 2001).

3.5 Conclusions

The results of this exploratory study show that there are robust biases which affect children's communication about their peers' activities. Children in the study populations were biased towards (a) identifying negative behaviour on the part of others, (b) that was directed at them; and then (c) reporting it truthfully to an authority figure, (d) which often resulted in punishment for the miscreant. My results in the areas of negative bias, truthfulness and adult responses were broadly in agreement with the findings of Ross and den Bak-Lammers (1998) for tattling between siblings.²⁸ If this kind of verbal behaviour was also characteristic of earlier stages of human evolution, it would have contributed to the social environment in which systems of norms and punishment evolved, since children would have been predisposed to report transgressive behaviour accurately—especially if it resulted in negative affect for themselves—and adults would have been predisposed to punish those responsible for the transgressions. Without the accurate verbal reporting, and punishment, of those who violate them, social norms would likely have much less impact on behaviour (Ingram et al., 2009).

In addition to the general biases in children's behavioural reporting discussed in the previous two paragraphs, there were notable individual differences in tattling. Tattling also seems to be quite strategic in character, being related both to social

²⁸ There was no data on egocentrism from the sibling studies of Ross and den Bak-Lammers (1998), since they focused on pairs of siblings, with no third party involved.

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dominance and to relational aggression. These results lead me to emphasize that tattling should be considered not as universally adaptive behaviour, but as an interpersonal strategy that is adaptive for particular children in particular social contexts. The relationship between tattling, dominance and relational aggression is a complex one, however. Crick and colleagues (1997) found that relational aggression in the preschool correlated with certain forms of peer rejection when practiced by girls, but with high ratings of peer acceptance when practiced by boys. And in contrast to the preschoolers in the present study, tattling may be associated with *low* social status among teenage boys (Friman et al., 2004).

What is responsible for this developmental shift? The 3- and 4-year-olds in this sample seemed to be heedless of any negative value judgements attached to tattling, for they often tattled within earshot of the accused, yet the accused never complained about the act of tattling. The lack of negative reputational consequences for tattling would enable some children to use it to assert their dominance over peers who performed proscribed actions, without damaging their own status—a classic strategy of relational aggression. Cillessen and Mayeux (2004) found that relational aggression contributed to social status in 10- to 14-year-olds, so it seems that aggressive impulses and punitive sentiments do not disappear, but that there are changes in the verbal strategies used to achieve dominance. The more covert forms of relational aggression used in later life may be an adaptation to the adult environment of socially aware individuals who are acutely conscious of their own and others' reputations (Ingram et al., 2009). As children become more independent, relying on third parties to fight their battles might be taken as a sign of weakness, and the negative effects on their reputation might cancel out the benefits of receiving external help. The power of gossip to damage reputations also becomes better

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understood through middle childhood (Hill & Pillow, 2006), and so reporting a peer's activities is more likely to be perceived as aggressive. In addition, as adolescents increasingly identify with their peer group, reporting peers' activities to an adult authority figure may be seen as an act of in-group betrayal. The process by which children acquire a norm against tattling, and switch to more covert strategies of relational aggression (such as spreading rumours), may be linked to the deployment of increasingly sophisticated theory-of-mind and perspective-taking skills (Ingram et al., 2009).

Did the reporting of norm violations contribute to the adaptive value of language, as Dunbar (2004b) supposed? Clearly, this research—or any research based solely upon the study of modern populations—cannot be used to give a definitive answer to that question; answering it properly would require the integration of primatological, palaeoanthropological, ethnographic and neuroanatomical evidence, and probably also computer models and experimental studies. But developmental psychology also has a role to play in answering that question, because developmental studies of infants and young children show us how beings who are born into the world without any understanding of norms gradually learn to live in a world that is intricately structured by norms, just as our ancestors did over hundreds of thousands of years. From this perspective, it is hard to see how the reporting of norm violations might have contributed to the *initial* adaptive value of language, since shared norms require some sort of language if they are to be communicated at all. A predisposition to report norm violations might however have been an *exaptation* (Gould & Vrba, 1982; see also Andrews, Gangestad, & Matthews, 2002) which allowed language to contribute to the evolution of complex systems of cooperation, much as birds'

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feathers originally evolved for insulation but contained serendipitous design features that enabled the subsequent evolution of flight.

The study of tattling by modern-day children cannot provide us with a direct window onto the original design features of language, but it does give us some tentative clues as to what those design features may have been. Children are biased towards reporting negative things that their peers have done, especially to them; they are generally truthful; and adults do not often ignore them. These design features make sense if early forms of language, at least for children, were concerned with seeking aid when children encountered a problem that they couldn't deal with by themselves. Applied to the social domain, these design features would have created a cognitive environment in which unwelcome behaviour could be reported, therefore encouraging the evolution of metacognitive systems—notably moral reasoning and theory of mind—to help individuals protect their reputations (Ingram et al., 2009; see also Bjorklund, Cormier, & Rosenberg, 2005). One major puzzle, however, surrounds the extension of such behavioural reporting to cover norm violations for which the audience, a third party, or nobody in particular was the victim. It is possible that this sharing of information requires some sort of altruistic impulse, much as humans are marked apart from other primates by their altruistic sharing of food (Kaplan & Gurven, 2005).

In a sense, then, the particular forms that children's behavioural reporting takes—the design features outlined in the previous paragraph—may represent an *ontogenetic adaptation* (Bjorklund & Pellegrini, 2000, 2002) to the child's social environment. Lacking the negotiating skills to deal with social conflict, the child reports the negative behaviour of others to adults who can handle them more effectively. Yet as with rough-and-tumble play (Scott & Panksepp, 2003; but cf.

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Pellegrini, 2007), tattling might have deferred benefits as well as immediate ones. Children who reported other children's breaches of impersonal, conventional norms might have been using tattling as a way of getting feedback from adults to "scaffold" their developing moral understanding (see Buzzelli, 1997, on scaffolding in moral discourses between parent and child). From a developmental systems perspective, it is not mutually exclusive for a behavioural trait to have both ontogenetic and deferred adaptive value. Indeed, it may be more helpful to view adult behavioural traits as adaptive transformations of earlier traits due to the changing social environment.

In the next chapter, I undertake a detailed qualitative analysis of data drawn both from the behavioural observations described here and from the more prolonged process of participant observation in the two preschools. The aim is to investigate the meanings and motivations of tattling from both the children's and the teachers' points of view, and to use the understandings thus gained to shed light on the socially strategic nature of tattling.

4. THE SOCIAL CONTEXT AND MOTIVATION OF PRESCHOOL CHILDREN'S TATTLING

As explained in Section 2.5, a mixed-methods design was chosen for this thesis, largely because of the exploratory nature of the research. Chapter 3 presented the results of the quantitative observational methods that I used. This chapter presents the results of the qualitative method of participant observation that I started using a week before the quantitative methods, and continued using for the duration of my stay in the two preschools. I start with a brief discussion of the epistemological and ethical reasons for the use of participant observation in the present research. I then present some background ethnographic data on the preschools where the observational research was conducted. Following this, I describe what daily life was like for me in the schools, and the nature of my interactions with both children and staff. Participant observation proved to be very useful for investigating the pragmatics of tattling as a form of everyday speech act for children, and these results are set out in Section 3.4. Another area where participant observation was useful was in the exploration of the dynamics of gender, class and ethnic diversity across the two preschools. I conclude with some reflections on what the participant observation of tattling can tell us about the nature of both peer relationships and teacher-child relationships in preschool settings.

4.1 Use of Participant Observation as a Research Method

4.1.1 *Reasons for Using Participant Observation*

Participant observation is the technique of observing a social activity while simultaneously participating in it in an active, non-observational role (Fetterman, 1989; Hammersley & Atkinson, 2007). As a research method, participant observation has historically been associated with the ethnographic approach of social/cultural anthropologists (see, e.g., Kuper, 1996). An ethnographic approach allows the researcher to uncover more of the context of human activities, rather than taking an isolated snapshot of behaviour as in more traditional observational psychology (Coolican, 2004, pp. 130–134).²⁹ Accordingly, one of the main aims of using participant observation in the present study was to position tattling within a detailed social context, and to get a sense of how it might take different forms in different sets of circumstances.

Ethnographic context is often elaborated by questioning (fellow) participants about their intentions, reasoning processes, and emotions, and about the cultural significance of what they are doing. In this study, due to the children's young age, I did not attempt to question them in this way. However, this disadvantage was offset by the children's apparent lack of awareness that they were being observed. Senior teachers and external educational specialists often made notes on certain children's behaviour in connection with special-needs evaluation. The children were also used to seeing their teacher writing lesson plans, filling in forms and so on in the classroom; so they did not seem to find my writing in a notebook to be strange

²⁹ For use of an ethnographic methodology with children, see Corsaro (1997), Fine (1988), Hammersley (1990), and Siraj-Blatchford and Siraj-Blatchford (2001). For ethnographies of preschool children in particular, see Corsaro (2003), and A. B. Smith and Inder (1993).

4. *Social Context and Motivation of Tattling*

behaviour for a classroom assistant, and were not in the least self-conscious about their own behaviour while I was writing about them. Occasionally a child would ask me what I was writing in my book, and I would generally say that I was writing down things that happened in the classroom—an answer which seemed to satisfy them well enough, on the whole. This lack of awareness of the observer is rarely the case with adults, and it allows more confidence that the participants' behaviour was not greatly affected by the presence of an observer. While the behaviour of the adult teachers and classroom assistants may well have been more distorted than that of the children, it was possible to gain contextual insight by questioning the adults about typical tattling behaviour and their reactions to tattling.

Another major reason for using participant observation was to examine the meaning and motivation of children's tattling, which are only really accessible through an examination of its detailed social context. In this chapter I will set out some of the possible motivations for tattling, along with extended examples of each kind of motivation in context. The meanings that tattling held for adults are also very important in explaining their responses to it. In addition to questioning adults about their reactions to tattling, participant observation allowed me to get a sense of how it feels, as an adult in a position of authority, to receive behavioural reports from children about their peers.

Criticisms of participant observation as a method for childhood research have often centred on the potential distorting effects on behaviour of an adult's presence (Coolican, 2004, pp. 130-134; Fine, 1988; Pellegrini, 2004). This was not a concern in the current research, which took place in a setting in which adults are always present. I was attempting to act as much as possible like a normal classroom assistant, and there is no reason to believe that the children saw me as anything else:

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it is quite common for secondary-school or undergraduate students in Northern Ireland to perform the classroom assistant role for a limited period of several days, weeks or months. Moreover, the research focused on acts of tattling, which are typically triadic interactions between a child, a peer on whom they report, and an adult to whom they do the reporting. Some degree of adult involvement was therefore unavoidable in most of these interactions, so the presence of an observer is unlikely to have altered children's behaviour radically.

4.1.2 *Ethical Issues*

Another reason for participating actively in the life of the classroom was to address the ethical problems associated with taking a "hands-off" approach in situations where children were calling for moral reinforcement or clarification (Fine, 1988, 1994). Essentially, when a child reports another child's proscribed behaviour to an adult, they are asking them to pass judgement on that behaviour. Ignoring such a report risks sending a signal that the infraction is a trivial one. It is possible to redirect such reports to a more qualified authority figure, and indeed this was the approach taken by A. B. Smith and Inder (1993). The participant observer in that study (Patricia Inder) wrote that:

"Children would often come up to me and tell me that one of the children had hit them or wouldn't let them play. In this instance I would send the child away to find one of the regular workers to resolve the situation." (A. B. Smith & Inder, 1993, p. 32)

I myself used this approach in ambiguous cases or when I was fully occupied with note-taking, but these preschool classrooms were very busy environments and it would have felt unfair on the regular staff to do this every time that tattling occurred. Besides, to do so would have been at odds with my brief to behave as a normal classroom assistant, since enforcing discipline—often by acting on peer reports—is a

central part of a classroom assistant's responsibilities. Failing ever to act in response to tattling might have marked me out to the children as being different from the other staff.

One final reason for carrying out participation was the notion of giving something back to the schools and the children involved, in return for them granting me access to observe the children's behaviour. Neither children nor schools received any material compensation for the observational phase of the research, so I thought of the labour I donated in helping out around the classroom as a kind of partial compensation for the disruption I caused to the staff and to the general flow of activities within the classroom. It must be noted, however, that in Preschool A the requirement for me to receive hands-on training in how to work as a classroom assistant probably increased the workload of the regular teaching staff more than the subsequent effort I expended could lighten it. By the time I reached Preschool B—which had a substantially lower staff/pupil ratio, and where staff were more proactive about engaging me in menial work—I was more experienced, and consider that I probably made a net contribution to the staff's workload. Summed over the two schools, my net contribution was probably about zero.

4.2 Research Setting

The research was conducted in two inner-city preschools in Belfast,³⁰ the principal city of Northern Ireland. The two institutions were quite different in their composition, physical layout, organizational structure, and cultural background; but

³⁰ Belfast City population: 276,459; Belfast Metropolitan Area population: 579,554 (Northern Ireland Census of Population, 2001).

they did share notable similarities in terms of teaching practices and the children's daily routine.

4.2.1 *School Location and Demographics*

Preschool A

The first preschool studied was an Irish-language *naíscoil* (nursery school, for children aged 3–4 years), attached to a *bunscoil* (primary school). The school was situated in a deprived residential area of Belfast, inhabited overwhelmingly by working-class Catholics. The Irish-language movement is strongly associated with the nationalist/republican political tradition, so the children's cultural background was very homogeneous. All children came from Irish families, with the exception of one boy who was of mixed Irish/Portuguese parentage. See Section 3.2.1 for details of the numbers and ages of boys and girls in this preschool.

All school activities, with the exception of gymnasium play and organized excursions, took place within a single L-shaped room, divided into several functionally distinct areas. There was no outdoor play area during the research period (November to February), although one was planned for the spring. However, the children were well served by a team of one teacher and two classroom assistants (all female), giving a staff/pupil ratio of at least one adult to five children (excluding the participant observer) for most of the study days. Instruction was mainly in Irish, but since the native language for all the children was English, the staff tended to use English when asking the children questions or explaining important points. Most children displayed good knowledge of basic Irish vocabulary when tested; but otherwise, they invariably spoke to the teachers in English—even when addressed in Irish. Hence, although I had taken some Irish language classes for the purposes of

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this research, I did not need to use the language very much, and the different linguistic environment did not cause any problems for this study.

Preschool B

The second preschool was an English-language nursery unit, again for children aged 3–4, attached to a medium-sized primary school. The school was situated in a semi-residential area close to a university: hence, it was attended by a mixture of children who lived locally and those whose parents worked nearby. The immediate surroundings were inhabited mainly by students, migrant workers and a handful of middle-class families; however, several children came from a nearby working-class area which was similar in economic status to the area served by Preschool A, but was mostly inhabited by Protestants from the unionist/loyalist tradition, along with some Chinese families. The children's cultural backgrounds were correspondingly much more diverse: the majority came from Northern Irish families, but four of the children studied were ethnically Chinese (the Chinese having been the largest immigrant population in Northern Ireland for much of the 20th century), one was Malaysian, one Nigerian, and one Zimbabwean. In addition, two children were of mixed ethnicity (N. Irish / German and N. Irish / Spanish). Again, see Section 3.2.1 for details of the numbers and ages of girls and boys in this school.

The main classroom was roughly square in shape and was two to three times the size of the classroom in Preschool A. There was also a much smaller annexe, known as the "Quiet Room," which was separated from the main room by a door and a glass partition. Singing and story time took place at set times in the Quiet Room, at which times the door was closed and a normal volume of speech was not audible between the two rooms. Outdoor play sessions took place daily (weather permitting) in an

enclosed playground behind the classroom. If it was raining the children played in the gymnasium instead. One teacher and one classroom assistant (both female) were present with the children for the duration of the research. For about half of the study days, one of three students (all female) was also present: one of these was an undergraduate who was training to be a teacher; the other two were secondary-school students who were gaining work experience. The staff/pupil ratio was therefore much lower than in Preschool A: between 1:7 and 1:8 for half of the study time, and between 1:11 and 1:12 for the rest of the time (all figures excluding the participant observer).

4.2.2 *Daily Routine and Tasks Performed*

In each school, I spent the first week engaged purely in participant observation, before introducing quantitative methods from the second week onwards. I took notes throughout the morning, and typed them up each afternoon. During the analysis phase, after all observation was over, I used a software program designed for qualitative analysis (MAXQDA)³¹ to categorize emergent themes in the research. This proved especially useful when describing some of the motivations of tattling (see Section 4.4.4).

Preschool A

I spent 2 months engaged in participant observation at Preschool A, working 3–4 days per week, for a total of 98 hours over 33 study days. (This included time spent in quantitative sampling, from the second week onwards, when I was still responsive to the children to some extent.) I varied the days of the week on which I attended the

³¹ See <http://www.maxqda.com/>, retrieved May 19, 2009.

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school, as there would often be a slightly different routine (e.g. gymnasium play) on certain days. I normally came in for 3 hours in the morning—i.e., most of the school session, which lasted 4 hours. About two thirds of my time was spent in quantitative data collection, the rest in working with the children as if I were a normal classroom assistant. For example, I helped the children with puzzles and art activities; read stories to them; encouraged them to show off their knowledge of Irish; tidied up after them (while urging them to help me in this!); took part in their gym activities, such as football; and occasionally intervened (unprompted) in cases of conflict, if no other member of staff was immediately available.

For most of the time that I attended Preschool A, the children were engaged in free play, with a sit-down break (lasting about 30 minutes) towards the end of the morning. For 2–3 days per week, the children would take part in gymnasium play, with each session lasting about 30 minutes.

Preschool B

I then spent 2 months at Preschool B, working only 2–3 days per week, but for the entire school session (4.5 hours) on the days that I was present, for a total of 96 hours over 23 study days (including time spent in quantitative sampling, after the first week, and experimentation, towards the end of my stay). Again, the days of the week that I came in were varied. Due to the lower staff/pupil ratio, the workload of a classroom assistant was heavier in this school, and only about half of my time was spent in quantitative data collection. The rest of the time was spent in similar activities to those listed above, with the additional responsibility of helping to serve the children lunch, which lasted 30–45 minutes. The timetable at Preschool B was more structured than at Preschool A. A typical day looked something like Table 4 below.

Table 4. Daily Routine at Preschool B

<i>8:50 – 9:15</i>	Children gradually arrive, start to engage in free play
<i>9:15 – 10:30</i>	Free play at tables in main classroom and Quiet Room
<i>10:30 – 10:45</i>	Tidy-up time (children help out with tidying under adult direction)
<i>10:45 – 11:00</i>	Story time (teacher reads stories to children in Quiet Room)
<i>11:00 – 11:45</i>	Outside or gymnasium play (depending on weather)
<i>11:45 – 12:00</i>	Singing in Quiet Room and preparation for lunch (hand washing, teeth brushing)
<i>12:00 – 12:30</i>	Lunch
<i>12:30 – 12:45</i>	Primary movement (singing and dancing under direction of staff)
<i>12:45 – 13:00</i>	Individual reading (children split into two groups to look at books individually – without adult supervision – in classroom and Quiet Room)
<i>13:00 – 13:30</i>	Free play at tables in classroom, or group musical activities in Music Room upstairs (or outside play, if the weather was exceptionally good!)

As I have shown in this section, I experienced a wide range of activities and behavioural contexts in the two schools. Because I was actively involved in organizing the activities and ensuring the children's engagement in them, I think I

derived more of a sense of the meanings they held—for both adults and children—than if I had been a passive observer.

4.3 Research Practice

In this section I describe some of the qualitative social factors that affected the way in which I conducted research. Firstly, since I was acting as much as possible like a normal classroom assistant, my interactions with other staff members were very important, and the style of these interactions differed between the two schools. There were fewer between-school differences in my interactions with children, but understanding the dynamics of my relationships with the children at each school is no less vital for assessing the validity of my claims about their behaviour. Thirdly, the use of a mixture of qualitative and quantitative methods in the observational study offered many benefits (as discussed in Section 2.5), but also created difficult issues in the data collection phase; and some of these are explored here. Nevertheless, mixing participant observation with more structured techniques added great value to the study in that it helped me to get a sense of the wide variety of social contexts within the preschools, the differences between them from both the children's and the teachers' points of view, and the contexts in which the reporting of peers' behaviour did or did not tend to take place. Finally, one of the most important points to relate is how I myself dealt with tattling by children, and what it felt like to have to deal with it.

4.3.1 Interacting with Staff

There were differences in how I was treated by staff at the two schools. In both schools, I gave explicit instructions that I wished to serve as a classroom assistant

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and share in the everyday workload of teaching and caring for the children. The teachers at both schools seemed to take this on board, and appeared to genuinely welcome the prospect of having an extra pair of hands to help out. In particular, both teachers were keen to have a male role model for the boys in each class, since education at this age level tends to be dominated by female staff (e.g., Rolfe, 2006; Sumsion, 2005). However, staff at Preschool B seemed much more willing, in practice, than staff at Preschool A actually to assign me the typical tasks of a classroom assistant, such as tidying up. Often, when I asked if I could lend a hand with a particular task at Preschool A, I was politely but firmly turned down. There are a number of possible reasons for this difference, including the higher staff/pupil ratio at Preschool A, which led to a slightly lighter workload per staff member; my increased experience—and therefore increased confidence in working as a classroom assistant—for my stay at the second preschool; and cultural and personality differences between staff at the two schools (staff at Preschool A were less highly educated, for instance).

Staff at both schools were universally very friendly to me. However, I always felt a slight distance between us, which I believe was due partly to my role as an observer, and partly to my presence as a male in a generally female-dominated world. This distance was noticeably greater at Preschool A, due to my inexperience and the wider class and educational differences between me and the regular staff members at that school. The problem was exacerbated, I think, by the fact that I was performing a mixture of qualitative and quantitative research, rather than pure participant observation. When recording quantitative results, I often felt an internal conflict between my role as a participant observer—which should have meant reacting to events as a classroom assistant—and my role as a quantitative observer,

which required me to preserve a certain detachment from events on the ground. On occasions, particularly when I was conducting focal follows and not all the staff were present, I felt that those staff who were present could have used more help from me than I was able to give them without compromising my research. This was frustrating.

4.3.2 *Interacting with Children*

There was a qualitative difference in the way in that children initially reacted to me between the two preschools. Most of the children in Preschool B were confident and friendly with me from my first day. In contrast, while two or three children in Preschool A approached me on my first day, most of them (especially the girls) seemed somewhat wary of me for the first few days. There are two possible reasons for this difference, which are not mutually exclusive:

1. Many of the children at Preschool B may have had more experience of dealing with strangers, coming as they did from more diverse backgrounds and inhabiting a more cosmopolitan area.
2. The staff at Preschool B made an effort to introduce me to many of the children individually and explain that I would be attending the school regularly. The staff at Preschool A did not do this, so at first the children were probably wondering what I was doing there (they were not very responsive to my own attempts at introducing myself, perhaps partly because I tried to do so in Irish).

Within a couple of weeks, however, I felt as well accepted by the children in Preschool A as I ever did in Preschool B, so in the long term I do not think that this difference had much effect on the children's behaviour in front of me.

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Children in neither school seemed particularly conscious that I was observing them differently from the way in which staff members would observe them—even when I was engaged in intensive note-taking during the focal follows in *Preschool A*. Two or three children in *Preschool A* occasionally tried to write in my notebook, but I told them that this was not allowed (see Section 4.3.3 below). Children in *Preschool B*, in contrast, showed little or no interest in my notebook. I think this may have been because I was engaged only in very short-lived acts of note-taking for the event sampling and point sampling, rather than the protracted focal-follow time sampling that was also carried out in *Preschool A* (see Section 3.2.4).

In both schools, there was a notable difference between the level of authority held by me and the authority held by the regular teachers and classroom assistants. The children were much more responsive to discipline enacted by the latter: ironically, on several occasions of severe bad discipline I was left with little alternative but to report the children's behaviour to a staff member myself! My low level of authority was reflected in the children's tattling behaviour. Children in *Preschool A* seemed to use me as an audience of last resort, only tattling to me if I was positioned exceptionally close to them or if all the other adults were very busy, and sometimes walking right past me in order to tattle to a regular staff member. Children in *Preschool B* seemed more willing to tattle to me, usually choosing me if I was the closest adult to them. This difference is explained easily enough by the higher pupil/staff ratio and larger classroom size of *Preschool B*. And even in that school, children would often break off tattling to me in order to go to the teacher if I was not being responsive enough for their liking, or if she moved closer to us. These differences in authority level and tattling behaviour were probably due to the transient nature of my presence in the classroom, rather than to my status as an

observer: they seemed consistent with the interactions that the children had with three other students who were present in the classroom for short periods of time.

4.3.3 *Difficulties with Mixing Methods*

It would be misleading to imply that there are no drawbacks to using a mixed-methods approach that includes participant observation. Given that time and resources are always limited, one obvious problem is that spreading resources over several modes of investigation tends to lead to less depth in the results from each method, compared to what would be obtained if the same amount of time were devoted to a single approach or a set of related approaches. Another problem is that the results from different methods may be difficult to relate to one another. Together, these problems mean that the use of mixed methods is likely to raise at least as many questions as it answers. Yet this need not be a great drawback if one is engaged in exploratory research, where the questions raised can be tackled by other researchers—or oneself in the future—using more intensively applied methods. A more awkward problem, it seems to me, is the difficulty in reconciling the dual roles of participant and quantitative observer in the eyes of the other participants in the research process, and indeed in one's own eyes. There were several situations where this became particularly difficult, and one is explored here.

Sean was a fairly dominant boy—not quite as dominant as Conor, according to the analysis presented in Section 0, but he tended to assume quite a leading role among the boys of Preschool A whenever Conor happened to be absent (as was the case for the first few days of my research). Sean was one of the first children to approach me, and certainly the first to initiate a conversation with me. Indeed, during my initial week of participant observation I spent quite some time with him, as most

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of the other children were quite shy of me during this period and seemed reluctant to come near me. He was particularly fond of jigsaws, and we enjoyed solving them together and playing around with them.

Given this initial closeness, Sean may have found it harder than other children to cope with my transition (for part of the school day) to a structured observer. He certainly proved to be more persistent than his peers in trying to get my attention while I was taking notes, often asking if I could help him do a jigsaw. This was not a problem during event sampling or point sampling, since each event or point sample took less than a minute to record and I could easily hold him off until I had finished. The biggest problems came during the focal follows, since each initial focal follow session lasted for half an hour, and during this time I was constantly engaged in note-taking on the focal child's behaviour. A few minutes from the end of one such session, Sean approached me and asked, "Can I write in your book?" I held him off until the end of the session, and then—perhaps feeling a little guilty about not giving him quality attention—I showed him how to write his name and allowed him to draw a few doodles. In retrospect, this was probably a mistake, since it set a dangerous precedent: for the next few days, Sean would frequently ask if he could write in my book. He seemed particularly fascinated by the four-colour pen which I used for colour-coding my notes. Matters came to a head when I was carrying out a focal follow of Sean himself, which had to be abandoned after he started interacting with me too closely for me to take notes on him effectively. At one point he managed to wrest control of the pen from me altogether, which seriously undermined my authority in the eyes of the other children. Some of them started to ask if they could write in my book as well, and the situation was becoming quite unmanageable, until the teacher, witnessing my frustration, suggested simply telling the children that they

were *not allowed* to write in my book. I did this—backed up by the teacher—and the problem disappeared as quickly as it had arrived. I did still receive occasional requests to write in my book after that incident, but the difference was that they were no longer persisted with once I refused them.

Of course, this sort of problem might have occurred even if I had been conducting purely quantitative observation. But by initially setting myself up in the more interactive role of a participant observer, I probably made it more likely to occur. The key point is that if I had been conducting purely qualitative observations, I would not have minded the children writing in my book. This would have been quite a good way to build rapport with the children, and even to collect data on their styles of interacting with adults. During structured observation, on the other hand, they could not be allowed to write in my book, as this would have constituted a kind of tampering with the measurement device. This was not an insoluble problem, since I was trying to behave like a classroom assistant, and classroom assistants have items of personal property in the classroom—such as their handbags—which are clearly out of bounds for their pupils. All I had to do was to put my notebook and pen in that category. My mistake lay in originally allowing Sean to treat my equipment as if I were doing qualitative research, without thinking that he would not realize when I had moved into structured observation mode. It might be thought, then, that one solution for this sort of problem, when conducting mixed-methods research, would be to plan for the qualitative element of the research with the quantitative element already in mind. I am not sure if this is a good solution, however, because in the long term it was good for my understanding of children's worlds to experience this problem directly, and to have to remedy it on the fly. Nor is the irony lost on me that, while researching children's understanding of social norms, I had not only to create a

new norm (“You’re not allowed to write in my book”), but also, once or twice, to appeal to the higher authority of the teacher in putting a stop to behaviour that I didn’t like—just as children do when they tattle on their peers.

4.3.4 *Exposure to Various Social Contexts*

A key advantage of performing participant observation, compared to performing structured observation during a particular type of play activity, and especially compared to experimentation, was that it allowed me to view the same children’s behaviour across a range of social settings and activities. Children behaved quite differently in free play contexts than in more structured settings, such as story time or lunchtime. Behaviour in the former sort of context tended to be quite chaotic and ephemeral, with children constantly changing their physical locations and merging in and out of sub-groups, as well as changing the activity they were engaged in, seemingly on a whim. In the latter type of context, children were much more static and focused on a single activity, and any excessive mobility or engagement in other activities was swiftly addressed by a staff member. Generally speaking, tattling seemed to be much more frequent in the former sort of context—for instance, it was noticeably very common in the outdoors play at Preschool B. I think this was partly because norm violations and other unwelcome behaviour from peers were more common in the free-play settings, and partly because adults were able to monitor children’s behaviour less closely in such settings—meaning they were often unable to intervene in disputes before they were reported to them. Tattling did often take place during transitions to more structured contexts, however, such as when children were queuing to enter a room, or seating themselves to listen to a story. This may

have been due to the difficulties involved in negotiating roles and positions in such circumstances.

4.3.5 *Dealing with Tattling*

As stated in Section 4.1 above, part of the motivation for using participant observation as a research method was to find out how it feels, as an adult, to be the recipient of tattling from children. There was also an ethical side to this rationale: I wanted the children to see me to be taking a stand on moral issues, rather than ignoring them or deferring responsibility to a regular member of staff (cf. A. B. Smith & Inder, 1993). Nor were children shy about tattling to me, after the first few days of familiarization in Preschool A (and right from the first day in Preschool B, with its lower staff/pupil ratio).

My attitudes towards tattling certainly changed over time, as I became more experienced in the role of a classroom assistant. I began by taking every reported dispute very seriously, attempting to resolve each situation in a just and equitable way. Often this resulted in me questioning both parties at great length, trying to find out exactly what had happened and what rights were being infringed. The problem was that the children were rarely satisfied with the results of this arbitration process. Even though I found that children rarely fabricated any reports (see Section 0 above), still two children might have entirely different views about the same situation. In the case of property disputes—one of the commonest norm violations that children reported—this was exacerbated by the practice of communal ownership within the classroom. For example, a boy who was playing with a toy train, then relinquished it briefly—perhaps to go to the toilet, or to retrieve another toy to ride on the train—only to return to it a moment later, would clearly regard the train as

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“his” toy. But another boy who had picked the train up in the meantime, not knowing that the first boy would return to it, would also regard the train as “his.” It was not easy to find a resolution that would satisfy both parties in such situations: often, once a temporary settlement had been imposed, a dispute would break out again a minute or two later with a similar or even identical premise.

From experience of these resurgent disputes and from observation of the responses of other teaching staff, I developed a strategy of distraction when dealing with low-level tattling such as this. Often one party to the dispute could be left in possession of a toy (in the case of property disputes) and the other engaged in a new activity, with plenty of attention from myself. On the other hand, sometimes this kind of distraction did not work and it was necessary to refer the dispute upwards to a permanent member of staff. I also did this in cases where a child was genuinely distressed, or where it seemed like a serious transgression might have occurred. On the rare occasions when no permanent staff member was immediately available, I followed the typical staff practice by calling the alleged perpetrator over myself, interrogating them, and usually asking them to apologize. One of the most delicate situations that I faced was when, based on a series of similar reports that one boy (Adam) had made to me about another (Martin), I suspected the latter of targeting him in particular for bouts of mild physical aggression. I spoke to the teacher about this: she had been unaware that it was a recurring problem, but she then spoke to Martin’s mother about the matter, who spoke to her son, and the child seemed chastened. This suggests that paying close attention to patterns of behavioural reporting between individuals might help to identify early forms of bullying in the preschool classroom or playground.

4.4 Tattling as Social Practice

In this section I attempt to set out the meanings and typical features of tattling as a kind of social practice. An underlying theme here is that although most tattling refers to actions that have only just happened, much of it also takes place within a context of ongoing low-level conflict between individuals. The decision to report a peer's behaviour to a higher authority figure, rather than seeking some other sort of conflict resolution, is a strategic one; and close attention should therefore be paid to the social context of tattling, in order to uncover the strategic motivations behind such decisions.

4.4.1 The Social Context of Tattling

One incident from the first week of participant observation in Preschool A stands out in my notes as the first time I appreciated the strategic qualities of preschool children's tattling. I was sitting at a table with two boys, James and Sean, who were making toy houses out of bricks. It soon became obvious that Sean was waging a campaign of verbal aggression against James, calling him a "bad boy" and threatening to wreck his house. James was clearly riled by these insults, and neither boy was swayed by my feeble attempts to distract them and to defuse the situation. Eventually, James snapped and knocked over Sean's house, presumably in a pre-emptive strike. Wearing a look of grim triumph, Sean got up, strode over to the teacher and announced, "James wrecked my house." James received a thorough scolding, and his counter-protestations that "He called me a bad boy" were given short shrift. As I would later discover, James had a reputation for bad behaviour and was a frequent target of tattling. This was the first of many conflicts that I witnessed between James and Sean. When I asked the other staff members about this, they told

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me that the two boys spent a lot of time in the same house, being cared for by a shared relative; so I began to see their relationship as akin to sibling rivalry, with Sean as the older brother figure, trying to get James into trouble. Since children would by no means tattle every time a peer did something that they didn't like, it was clear that the context of such ongoing, low-intensity conflicts was vitally important. Tattling could sometimes be a weapon that some children used in the campaign to gain positive attention compared to a rival.

This dynamic was certainly not confined to boys' interactions. Tattling was also implicated in conflicts between girls. An example will clarify this, and will illustrate too how tattling could often be followed by protracted bouts of conflict, as well as being preceded by them. The most dominant girl in Preschool A, Caoimhe, often played with another quite dominant girl, Sinead, with whom she seemed to have a close but somewhat rivalrous relationship. On one occasion, during housekeeping play, I observed Caoimhe report Sinead to the classroom assistant, Miss W, for taking something that she was playing with. Miss W more or less ignored her, and Sinead continued to interact closely with Caoimhe for the next few minutes. About ten minutes after the initial tattling occurred, while the two girls were playing with small plastic figures (which linked together in chains) at a table, Sinead tried unsuccessfully to knock down Caoimhe's figures, before exhorting Caoimhe to play with the toys "properly." The next minute she was telling Caoimhe that she was making a "big long chain" that Caoimhe could knock down. The two girls clearly had very different ideas—at least at that moment in time—about what was the correct way to play with the chain-figures. This point was reinforced a couple of minutes later, when Caoimhe tried to report Sinead to a classroom assistant for once again knocking down the figures. The assistant was deep in conversation and did not

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respond. However, Caoimhe tried again two minutes later, this time very insistently and astutely claiming that Sinead had hurt Caoimhe's finger in the course of knocking over the figures. Miss W admonished Sinead mildly, whereupon the latter left the table and started to wander around the classroom, badgering other members of staff for attention.

The two situations that I have just recounted are superficially quite different. In the first situation, Sean seemed to tattle on James in revenge for wrecking his toys. Tattling appeared to resolve this conflict, at least temporarily, as the teacher moved in to separate the two boys. In the second situation, in contrast, the initial tattling by Caoimhe on Sinead seemed to initiate, or at least escalate, a period of conflict between the two girls, and actually led to more tattling on Sinead by Caoimhe. There are also similarities between the two cases, however. Both Caoimhe and Sean seemed to be relatively astute at using tattling to gain a favourable intervention from an adult. When James tried to counter-tattle on Sean, he was ignored, perhaps because the transgression of which Sean was accused—calling James a “bad boy”—was less serious than James's initially reported transgression of wrecking Sean's house, and perhaps also because of a certain “first mover” advantage on the part of James. Sinead did not counter-tattle on Caoimhe, at least in this episode; but what is notable about the latter's behaviour is that she persisted in tattling even when initially ignored by the classroom assistant, escalating the degree of the transgression to the thoroughly *moral* issue of physical harm, which the latter could not easily ignore (cf. Nucci & Turiel, 1978, who found that preschool staff were more likely to respond to moral transgressions than conventional ones).

What was also noticeable was the use of provocation by both Caoimhe and Sean—refusing to play with toys in the way that Sinead wanted, or threatening to

knock down James's bricks—to bring about a situation in which they were justified in reporting their adversary's actions to an adult. Persistence and repeated provocation create the impression of a premeditated aspect to tattling by dominant children, whereas other children's tattling often seemed more like a reaction to provocation (as with the phenomenon of counter-tattling, described in Section 4.4.3 below). It is no surprise, then, that in the dominance analysis reported in Section 0, Caoimhe was rated more dominant than Sinead, and Sean more dominant than James. Indeed, recent evidence suggests that dominant children may generally have more effective social skills than their more submissive peers (Vaughn & Santos, 2007).

4.4.2 Threats of Tattling

Children clearly understood the power of tattling to help achieve the punishment of those whose actions had displeased them. One way that this can be demonstrated is by recounting instances where one child threatened to report another's actions to the teacher.

Preschool A: Conor and Sean were lying on the floor of the *Leabharlann* [Library] area, playing dead and intermittently wrestling each other. Aisling entered the *Leabharlann*, followed by Saoirse and Aine. Conor quickly started throwing cushions at Aisling, while Sean watched, shouting excitedly. Aisling then started to throw the cushions back at the boys, and to use the cushions to push them back when they approached her. The retaliation seemed to displease Sean, who said indignantly, "I'm telling on you!" He immediately went over to Miss H [one of the classroom assistants] and told her, "Aisling pushed us." Conor went over and backed up his story, whereupon Miss W called Aisling over for extensive questioning.

Sometimes, as in this case, a child would use the threat of tattling as a simple statement of intent, and follow it up immediately with the act of tattling itself. At other times, a child might utter the threat and then stare at her adversary, waiting for

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her to respond: if she made a positive response, for example by sharing some toys, the dispute would probably be resolved; but if not, the threat of tattling would probably be followed up. Whether the threat was immediately followed up or not, the implication was clear: You have done something I don't like, and I can get someone else to make you pay for it. Additionally, the second type of situation, in cases where the accused child desisted from an activity before the threat of tattling was followed up, illustrates that the immediate threat of tattling was sometimes strong enough to change children's behaviour.

4.4.3 Counter-Tattling

A striking example of the strategic use of tattling in the context of ongoing disputes was the phenomenon of *counter-tattling*. This occurred when one child tattled on another, and the latter then accused the tattler of something (either the same offence or an entirely unrelated one), presumably in order to diffuse some of the blame that they were likely to attract from the audience. An example of this occurs in the altercation between James and Sean described in Section 4.4.1. There, James's counter-tattling was ignored, probably because the transgression he described was less serious than the one that Sean initially described. However, although he was unaware of the imbalance in seriousness of the two actions reported, the episode nevertheless implies some sophisticated moral reasoning on the part of James, in that it shows he was aware of the potential for a proscribed action to be mitigated if performed in retaliation for an earlier proscribed action by the victim (see Darley & Shultz, 1990).

A more effective kind of counter-tattling tended to take place when two children had a divergent moral perspective on a given situation:

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Preschool A: Jack wandered over to start painting at a table where Rachel was drawing alone. Soon a dispute broke out, when Jack tried to take the glitter pen from Rachel. He appealed for help to anyone who was listening, whereupon I intervened and told Rachel to give Jack the glitter when she had finished with it. She did this, but then went over to one of the classroom assistants and told her that Jack wouldn't let her have the glitter. Jack agreed to give it back to her, and then wandered off to talk to the assistant himself.

This sort of property dispute was very typical. In their interactions with peers and toys (and other classroom materials, such as glitter), children's behaviour is constrained by two rules—rules which seem rather obvious to adults, but which actually contain an element of contradiction. Children are constantly exhorted—and exhort each other—to share; yet it is also made clear to them that it is wrong to take an item from another child. Therefore, it was not uncommon to hear one party to a property dispute accusing the other of trying to take something, and the other party just as heartily accusing the first of refusing to share the item in question. When these two accusations were made to the same adult, a common response was to instruct the children to take turns. This was what happened, almost by accident, in the situation above: I encouraged Rachel to share the glitter with Jack, and then the classroom assistant encouraged Jack to share it with Rachel. Yet Rachel's choice of a different audience for her tattling than the person who had responded to Jack is significant: intuitively, one is more likely to receive an altered settlement to a dispute from someone who didn't make the original settlement. Rachel's actions here may thus represent highly skilled, socially strategic behaviour for a 3-year-old, possibly even involving a complex theory of mind.

Another form of counter-tattling seemed to arise from the tendency of children to imitate one another and to engage in joint activities:

Preschool B: During outside play, Ben and Joshua [who happened to be his younger cousin] had been tearing around the playground on

tricycles, frequently coming close to bumping into each other or other children. Eventually, Ben's tricycle crashed into Joshua's, with quite an impact. Joshua immediately jumped off his tricycle and ran over to Miss S, the classroom assistant, shouting out, "Ben crashed into me!" Ben responded, "He crashed into me too," but Miss S told him that he hadn't, and ordered him to hand over his tricycle to Joshua, since another child had taken Joshua's tricycle when the latter had dismounted to tell her what had happened.

Although superficially similar to cases in which an earlier transgression by the original tattler is used as justification for a later transgression by the counter-tattler, this situation is subtly different. Here Ben's expectation was that the blameworthiness of the action was diminished by the fact that Joshua was doing something similar, thus making the action less counter-normative. In a related phenomenon, but one that was perhaps not strictly counter-tattling in that it did not involve reporting the actions of the original tattler, children would point to the similar actions of a third party in an effort to excuse their own transgression. Some children even attempted to distract the attention of an adult who was admonishing them by pointing out someone else who was committing a completely unrelated transgression. Such attempts to deflect or diffuse blame were usually given short shrift by the teaching staff (as in the example above). Indeed, in my experience counter-tattling against an original tattler was generally more likely to be successful—in the sense of achieving a more equitable settlement—than counter-tattling against a third party. Perhaps this was because the first type of counter-tattling was seen as presenting another side of the story, whereas the second type was seen merely as an attempt to get the tattler out of an unpleasant situation.

In this subsection, I have tried to reinforce the point that tattling does not happen randomly or sporadically, by highlighting three types of situations in which one child's tattling can occur in response to another child's tattling. In the first type of

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counter-tattling, an accused child (James) attempted to justify his proscribed behaviour in terms of retaliation for earlier proscribed behaviour by the initial tattler. In the second type, the counter-tattler (Rachel) was concerned to present a different perspective on a complex moral situation (such as the case of taking versus not sharing). The third type—which was not always counter-tattling, strictly speaking, as it did not necessarily involve a counter-accusation against the initial accuser—involved an attempt to diffuse blame by pointing out a transgression by a peer (Joshua) that had gone unpunished. All three types demonstrate a complex moral understanding on the part of these preschool children—a concern with providing information that would change the moral perspective of an adult, leading to some mitigation in their punishment. These strategies often worked: although there were not enough episodes of counter-tattling to test the hypothesis with quantitative data, as a general rule the first type of counter-tattling often seemed to result in the initial tattler being reprimanded at the same time as the counter-tattler, while the second type tended to result in an imposed, but fairly equitable, resolution to the dispute. (It was noteworthy that children seemed to find being punished alongside a peer far less unpleasant than being singled out for punishment on their own.) Only the third type of counter-tattling was likely to be ignored as an unpleasant distraction, with any admonishment of the second child to be accused being generally less severe and postponed until after the counter-tattler himself had been admonished.

Cases of counter-tattling are examples of tattling which was motivated by an accused child's desire to mitigate their punishment, or sometimes to gain revenge against their accuser. In the next two sections, I explore other motivations that children had for tattling, and how these seemed to affect the different kinds of responses that they were likely to receive from adults.

4.4.4 *Motivations for Tattling*

As my brief discussion of the subtleties of counter-tattling indicates, tattling is a complex and multifaceted activity, which resists easy analysis. Nevertheless, it was possible—through working alongside individual children and staff over extended periods of time as a participant observer—to gain some insight into the range of possible motivations that children had. In this section, I will list the various types of motivation that children seemed to have, and provide an example of a case that illustrates each type of motivation.

Revenge / Retribution

As some of the examples of counter-tattling illustrate, children often seemed to report peers' negative behaviour out of a desire for revenge (or perhaps, more positively, for retributive justice). This was particularly the case when the tattler was the main victim and the other child's action could not be undone, as with many instances of physical aggression:

Preschool B: Ryan came over to Mrs Y and told her: "Matthew hit me—he went like this," while miming a thumping action. Mrs Y made Matthew sit apart from his classmates, on a chair at the side of the classroom, for a couple of minutes [a very common punishment in this preschool]. Ryan appeared satisfied that his words had led to Matthew's punishment.

I grew very familiar with the slightly smug look that often accompanied another child's punishment for a misdemeanour that a tattler had reported. It sometimes seemed to outweigh any distress the children felt at the transgression itself!

Deflection of blame / Mitigation of punishment

The examples of counter-tattling show even more clearly that children sometimes tattled in order to get themselves out of trouble. The notion that this is one of the dominant motivations for tattling is a classic misconception, which is

often found in materials aimed at early years teachers (e.g., Hammerseng, 1995; SAMHSA, 2004). Yet outside the context of counter-tattling, where a child had already been accused of a transgression by another child, it did not seem to be common. That is, when accused of a transgression by a teacher, without another child being involved, children did not tend to make up stories (“tell tales”) about what their peers had done. There was one rather disturbing exception in Preschool B, where Martin seemed to be consistently picking on Adam by carrying out repeated petty acts of violence, such as pinching and (semi-playful) punching. I was very concerned to deal with this early manifestation of bullying, and questioned Martin intensively as soon as I began to suspect what was happening. He denied punching Adam and claimed that Dylan was responsible.³² He even claimed that Adam “like[d] being punched!” These accusations took place on a couple of occasions when Adam had reported Martin’s behaviour, but also on at least one occasion when I was interrogating Martin after witnessing his bullying myself. Martin’s sophisticated attempt to deflect blame onto Dylan ran contrary to the general trend for children not to fabricate stories about peers’ behaviour (see Section 3.3.3); but was in accordance with research showing that some bullies have sophisticated abilities in the domains of social cognition, emotional awareness and theory of mind (Sutton, Smith, & Swettenham, 1999).

Conflict resolution

In addition to cases where tattling was concerned with the past behaviour of peers—as in the two examples above—children also used the reporting of peers’

³² Dylan was quite notorious for his behaviour, and was frequently the target of tattling by other children—more frequently than any other child in Preschool B, in fact.

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behaviour strategically in an attempt to gain control of resources, or to gain some other positive outcome to an ongoing situation. This was particularly true of property disputes where the tattler was the main victim:

Preschool A: After engaging in quite an active struggle with Caoimhe over a toy baby bottle, Aisling came up to Mrs T and told her, “Caoimhe won’t let me have the bottle.” Mrs T asked her, “Who had it first?” Aisling admitted that it was Caoimhe, and Mrs T told her to wait her turn.

Here, Aisling’s intent was not primarily to gain revenge on Caoimhe for not letting her have the bottle. Her main aim was simply to gain control of the bottle. Although it may appear as if she was unsuccessful, in fact she used Mrs T to gain an equitable resolution to her conflict with Caoimhe, based on the notion of taking turns. If, a minute or two later, she had asked Caoimhe for the bottle and Caoimhe had still not given it to her, she could have taken the dispute to Mrs T once again and the latter would almost certainly have ruled in her favour. This was therefore a much more satisfactory outcome than either engaging in a physical struggle with Caoimhe that she would probably have lost (due to Caoimhe’s dominance), or waiting until the other girl eventually relented or grew bored of playing with the bottle. Here the potential role of behavioural reporting in reconciliation mediated by a third party is clear (see the literature reviewed in Section 2.4.2 above).

Comfort / Sympathy

The previous examples might suggest that tattling tends to be intimately connected to the social dynamics of children’s conflicts—a means of either gaining revenge, justifying an individual’s own behaviour, or resolving a dispute. Yet tattling sometimes seemed to be more about gaining comfort or sympathy for something unpleasant that had happened, with the details of what had happened almost

incidental except insofar as they allowed the possibility of gaining favourable attention from an adult.

Preschool A: Jack approached Miss W and told her that Sean had taken his toy house away. Miss W did not really address this issue, but instead placated Jack by handing him some art materials and talking to him about them. Jack did not mention the property dispute with Sean again.

In this case, Jack received quite a tangible benefit from his tattling, in the form of some one-to-one art tuition from Miss W. In other cases, children seemed content to have their concerns acknowledged, often through a simple comment such as “Oh dear,” or “That’s not very nice,” before returning to whatever they had been doing.

Informing / Helping

The motivations discussed so far apply to dyadic conflicts, which admittedly made up a high proportion of the subject matter of children’s tattling. But there were also plenty of cases for which none of the above motivations could logically apply: for example, violations of social convention for which there was no particular victim; or transgressions of which a third party was the victim. In such cases, children commonly seemed to tattle out of a simple desire to inform the teacher of something she ought to know about, perhaps believing that this would secure them favourable attention.

Preschool B: In the playground one morning, Matthew came running over to Mrs Y and told her that Thomas was climbing on the toy house, pretending to be Spiderman. He then went running back to the house, telling Thomas that he had to get off. But Mrs Y then called both boys over to her and told them sternly not to climb on things. I asked her why she had told Matthew off, and she told me that she had seen both of them climbing on the house, out of the corner of her eye.

There are two points to note about this incident. Firstly, Mrs Y was aware of the boys’ transgression before it was brought to her attention by Matthew, but her disciplinary action was precipitated by the act of tattling. Tattling is not simply about

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a pure act of informing, therefore, but also creates a demand for action on the part of the teacher, about something to which she might otherwise turn a blind eye. Secondly, Matthew was reporting a transgression of which he himself was guilty. Perhaps, at some level, he was aiming to distract attention from his own misdemeanour by pointing out someone else's. It is an interesting question whether children are more or less likely to report types of misdemeanours that they themselves commit, and one which I hope to address in a future experimental study (see Section 5.4.3 below for more details).

A frequent topic of tattling that might be interpreted as rather sociocentric occurred when one child was perceived to take more than his or her fair share of bread or milk at the snack table. Other children would report this even when they themselves had plenty of food and drink in front of them. In what seemed like an early manifestation of distributive justice, they seemed to be more concerned with the principle of one child having relatively more than the others, rather than with any absolute loss of resources on their own part (for related experimental results, see Damon, 1977; Fehr, Bernhard, & Rockenbach, 2008).

Boredom / Attention-seeking

Finally, children occasionally seemed to tattle on peers simply as a means of getting attention from the teacher. Although such attention can be in short supply in a busy classroom, and although attention-seeking is arguably one of the stereotypical motivations for tattling in the popular imagination (e.g., Payne et al., 2005), the importance of this factor should not be overstated. In the great majority of cases of tattling that I observed, children manifestly possessed a genuine grievance, and this is arguably supported by the finding (described in Section 3.3.4 above) that they

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were more likely to report transgressions of which they themselves were the victims. Nevertheless, tattlers occasionally seemed rather bored and half-hearted. The clearest examples of this were when they did not persist if their audience ignored them, or even trailed off halfway through what they were saying.

Preschool A: Aisling, Caoimhe, Chloe, Rachel and Sinead were all playing together in the kitchen area along with Miss H, with Caoimhe interacting particularly closely with the latter (standing next to her, making prolonged eye contact, etc.). Chloe was cutting off slices of (toy) cake to give to the others. Caoimhe tried to have a go at this herself, but Chloe wouldn't let her. Caoimhe started to tell Miss H that Chloe wouldn't let her cut the cake, but lost interest when Miss H engaged her in another task.

Joint play disputes such as this one were a common context for this sort of abortive, half-hearted tattling. The attention-seeking motivation is suggested by several contextual factors, including the fact that Caoimhe had already been seeking attention from the classroom assistant, Miss H; the fact that Caoimhe, as a dominant female, was competing for attention with four other girls in a stereotypically female environment (the toy house/kitchen); and the fact that she did not persist in tattling once Miss H started to pay her more attention. In situations lacking similar contextual features, there was no reason to suppose that tattling was done simply to attract attention, rather than reflecting a genuine grievance; on the contrary, children often seemed very emotionally involved in the event that they were describing.

* * *

Of course, the motivations described above are not mutually exclusive—more than one was sometimes present in the same incident of tattling—and they do shade into one another, to some extent. But it may nevertheless be possible to classify cases of tattling in terms of where the focus of the tattler's attention lay: whether on the peer whose behaviour he or she was describing, as with cases of revenge/retribution and

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conflict resolution; on the self, as with cases of comfort/sympathy and boredom/attention-seeking; or on the audience, as with cases of informing/helping. The range of possible motivations therefore reflects the triadic relationship in which the act of tattling is embedded, and reinforces the point that even at this young age, language is a complex and strategic social activity.

Since, in this thesis, I have been viewing tattling as a developmental precursor to gossip, it is worth comparing the typical motivations for gossip with the typical motivations for tattling. Gossip, like tattling, is a strategic social activity, performed for a range of different motives. Foster (2004) described how gossip may be used to spread useful information; to reinforce friendship and intimacy; to exclude outsiders or social deviants; or simply to provide entertainment. Although Foster called these the four “social functions” of gossip, they work equally well for describing the range of conscious motivations for gossip, humans being the socially aware creatures that we are. Some of the possible motivations for tattling in children are strikingly similar to the motivations for gossip in adults. In particular, tattling is used to exclude social deviants, and indeed punishment in the preschool classroom often took the form of temporary exclusion from a group activity. Tattling is also used as a source of entertainment, especially in the form of positive attention – just as the adult who fits the stereotype of a gossip tends to be something of an attention-seeker. Moreover, while this was hard to assess quantitatively, it seemed clear that children often tattled in a disinterested way, simply in order to provide useful information about rule-breaking to an authority figure.

4.4.5 *Variability in Adults' Responses to Tattling*

As well as the individual and situational differences in children's tattling, it is important to note that there were striking differences in how adults responded to tattling: not only between individual staff members, but also for the same staff member in different situations. For example, two of the classroom assistants (one from each school), who were particularly active in tidying the classroom and organizing materials, seemed to me to react quite differently to incidences of tattling, depending on whether they were actively engaged with the children at the time, or more engaged in tidying / organizing. If the former, they were more likely to support the tattler—if they believed they had a genuine grievance—or offer a detailed excuse for the miscreant's actions; but if their attention was not focused on the children, they were more likely simply to ignore the tattler, or offer some minimal acknowledgement such as “Did he?” (unless the transgression was a particularly serious one, of course). The two teachers and the other assistant, who seemed to be slightly less involved in the day-to-day maintenance of the classroom, seemed to respond to tattling in a more consistent way. Clearly, such differences in individual responses to tattling offer scope for the strategic addressing of particular adults, depending on who they are and what they are doing at the time. I got the strong impression that, if their appeal for help was ignored or rejected by an adult who was busily engaged in a task, children would be more likely to repeat the appeal to an adult who was less busy, but not vice versa. Occasionally children even seemed to ignore a busy adult who was closer to them, in order to take their problem to a more receptive adult who was further away. Again, this sort of behaviour demonstrates a strong social cognitive awareness at an early age.

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In addition to personality differences in the teaching staff's responses to tattling, it is likely that there were also generational differences, resulting from cultural differences in the training that they had received. All of the permanent staff at the two nursery schools that I visited were aged between 25 and 30; all of them shared quite a responsive, child-centred approach to teaching; and all of them took quite a tolerant attitude towards tattling: I never heard any of them reprimand a child for the specific act of telling on a peer. Differences emerged when a substitute teacher was working at Preschool B during the last couple of weeks that I was present there. This teacher, Mrs A, appeared to be in her late 50s or early 60s, and had what might be described as a more traditional approach to early years teaching, characterized by an emphasis on order and discipline. She was the only member of staff that I observed to reprimand children for the specific act of tattling, as follows:

Preschool B: This morning's session of outdoor play was characterized by frequent occurrences of tattling, which continued as the children were lining up to go back into the classroom. After a couple of children had reported incidents of mild physical aggression, such as pushing and nipping, Thomas told Mrs A that Cameron had hit him. Mrs A had apparently had a stressful morning, and exclaimed, "You are all little tell-tales, aren't you—always telling tales on each other."

Here, Mrs A's response to tattling is characteristic of the traditional approach to tattling by teachers, which was to disapprove of tattling as undermining peer solidarity and as generally wasting the teacher's time (Hewitt, n.d.; Williams, 1989). It is easy to see how this approach would chime with broader cultural maxims—popular in upper-middle-class British society for the 19th and much of the 20th centuries—about children being seen but not heard, and not speaking until they are spoken to. However, although Mrs A did reprimand the children for a tattling on this one especially stressful occasion, she generally did not seem to ignore tattling any

more than the other staff members whom I worked with, and on several occasions went to great lengths to uncover the rights and wrongs behind some misdemeanour reported to her by a child.

4.5 Cultural Differences between the Preschools

Observational research was carried out at two preschools in order to give an initial indication of the features of tattling that might be preserved across differing cultural settings, and those that might vary. The quantitative differences that were found between the two schools were reported in Section 3.3.13 above. Most of these differences were at the level of trends rather than robustly significant effects (when controlling for the number of tests that were made); but I did find some interesting interactions between the setting and the children's gender when investigating rates of tattling, which merit further discussion. The ethnographic evidence obtained during participant observation can help to explain these interactions. First, however, I will briefly summarize the main cultural similarities and differences that I noticed between the two preschools.

4.5.1 Similarities and Differences between the Preschools

From the brief sketch of everyday life at the two schools provided in Section 4.2 above, it should be apparent that there were more similarities than differences between them. This is not surprising, since they were located within the same city. Although they were situated in different school sectors within the Northern Ireland educational scheme (Irish-medium in the case of Preschool A; state-controlled in the case of Preschool B), and were administered by separate government bodies (the North and West Belfast Health and Social Services Trust in the case of Preschool A;

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the Belfast Education and Library Board in the case of Preschool B), a common set of state guidelines govern preschool provision across Northern Ireland. In particular, the following set of common features are noteworthy:

3. *Age:* No child at either school was younger than 3 or older than 4 (see Section 3.2.1 for detailed information about the participants' ages). There was no significant difference between the mean age of the children at the two schools, $t = 0.85, p = .41$.
4. *Dominant Culture:* Although Preschool B was much more culturally diverse than Preschool A, and the majority religion also differed between the two schools, most children at both schools shared the same first language (English) and the same general culture (which might be described as Anglo-North-American).
5. *Daily Activities:* Children at both schools engaged in a wide range of similar activities (e.g., puzzles, art, construction, free play with toys, physical activity play, looking at books, and listening to stories).
6. *Staff Profile:* Both schools were run by a teacher, supported by one or two classroom assistants. All staff in both schools were female, and all were in their mid to late 20s.

As well as these similarities, there were also some differences between the two schools, as summarized below:

1. *Cultural diversity:* Preschool A was much more culturally homogeneous than Preschool B. All children at Preschool A were ethnically Irish—apart from one who was half-Irish and half-Portuguese—and all came from the Catholic tradition within Northern Ireland. The class at Preschool B included seven children from ethnic minorities, as well as two children of mixed ethnicity.

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While most of the remaining children came from the Protestant tradition, two came from the Catholic tradition; so the dominant ethnic identity was represented by only just over half of the class (13 out of 24 pupils).

2. *Class size and staff/pupil ratio:* The class at Preschool B was over 50% larger than the class at Preschool A (25 compared to 15 pupils, when research began). Yet there were only two full-time staff members in the larger school, compared to three in the smaller school. The difference in effective staff/pupil ratios was not as large as it first appears, however, since the teacher was often absent (without a substitute) from Preschool A, while a student often helped out at Preschool B.
3. *Physical space:* The classroom at Preschool B was about twice the size of the one at Preschool A. In the latter school there was also an annexe—known as the “Quiet Room”—separated from the main room by a door and a glass partition, where children could go to read books and play with musical instruments.
4. *Outdoor play:* Children at Preschool B had regular opportunities—about once a day, on average—for outdoor play in a playground adjoining their classroom. If the weather was bad they would usually play in an indoor gym instead. Children at Preschool A had no playground, and visited the gym only once every two or three days, which meant that they engaged in substantially less physical activity play than the children at the other school.
5. *Rules of the classroom:* Perhaps because of the lower staff/pupil ratio at Preschool B, the atmosphere there seemed slightly stricter, with a greater number of formal rules for the children to follow. For example, children were

required to line up more frequently, to sit in a certain position during story time, and to actively help with tidying up.

In the next section, I show how some of these differences—most notably the greater cultural heterogeneity in Preschool B—may have contributed to differences in the gender dynamics of the two preschools.

4.5.2 Gender Differences within and between the Schools

In Section 3.3.13 above, I showed that while there was little difference in the rates of girls' and boys' tattling in Preschool A, girls were significantly less likely than boys to tattle on peers in Preschool B. This result can perhaps be explained by differences in the gender dynamics of the two schools. While girls and boys did regularly interact with each other in both schools, they engaged in same-sex interactions much more frequently (as I was able to ascertain by means of social network analysis based on data from point sampling), and there also existed a certain amount of segregation with regard to the activities that they typically engaged in. Girls in both schools typically spent more time on art activities, while boys spent more time playing with animals and vehicles. In addition, girls in Preschool A tended to form relatively large peer groups of 4–5 individuals, who were often to be found in the house area, which contained a toy kitchen, toy food, household implements, dolls, etc. The house in Preschool B, on the other hand, was rarely used either by girls or boys. Girls in that school rarely formed groups of more than three—pairs seemed to be by far their most common configuration—and one of them was often to be found playing alongside boys with stereotypically “male” resources such as trains or dinosaurs (which was not the case for any of the girls at Preschool A).

It is also noteworthy that there was an uneven distribution of ethnic minorities between the sexes: 5 out of 11 girls were from an ethnic minority, compared to only 2 out of 14 boys.³³ The three Chinese girls tended to play with one another, as did the two African girls (in line with evidence that young children tend to prefer play partners with a similar ethnic identity; Finkelstein & Haskins, 1983; Howes & Wu, 1990). Although this is speculation (since I did not measure dominance directly in Preschool B) I suspect that the relative cultural heterogeneity of the girls compared to the boys in this school may have made it difficult for them to develop a strong intra-gender social grouping—a sort of local, gender-specific peer culture, consisting of a large group of densely interconnected girls who regularly engaged in stereotypically “female” play activities. This might have contributed to a relative lack of dominance among the girls, which was perhaps reflected in the findings that they were less ready to report peers’ behaviour, and much less likely to be rated by the teacher as relationally aggressive, than were the boys in this school (see the gender effects presented in Section 3.3.11).

4.6 Conclusions

Since tattling was typically a triadic interaction between child, peer and teacher (or classroom assistant), this study enabled me to draw some tentative conclusions both about preschool children’s relationships with peers and about their relationships with teachers, as well as about how each type of relationship is affected by the other.

³³ Note that one of these boys spoke excellent English and seemed to be highly acculturated, since his parents had also grown up in Northern Ireland.

4.6.1 *Tattling and Peer Relationships*

Tattling in these preschools was always embedded in a complex social context. It was not an automatic response to any one kind of situation or emotional reaction, but a strategic option that was selected from a range of possible options in widely varying situations, with divergent emotional colourings. The strategic nature of tattling is underlined by the prevalence of both counter-tattling, in which accused children tried to give their side of their story, and threats of tattling, in which children tried to use the possibility of behavioural reporting as a deterrent. Both of these activities show that children were aware of the potential for tattling to adversely affect their own and others' reputations. Tattling is a tool which some children attempt to use in sophisticated ways, both to manipulate peers' behaviour and to prevent peers from damaging their own reputation. This contrasts, at least superficially, with Hill and Pillow's (2006) finding that kindergarten children were not aware of the potential of linguistic reports to damage a child's reputation. I will return to this point in the conclusion to this thesis.

All examples of tattling observed in this study took place between peers who knew each other well, since they had attended the same school on a daily basis for several months. Moreover, children were more likely to report transgressions committed by those individuals with whom they played more frequently (see Section 3.3.10 above). It is likely, nonetheless, that some children at least would readily tattle on children whom they had never met before: Rakoczy and colleagues (2008) found that children readily protested about novel norm violations made by a puppet which they had only just encountered. It would be interesting to use behavioural ecological experiments to test the effects of variables such as social closeness and group identity (i.e., in-group/out-group effects) on the reporting of peers' behaviour.

4.6.2 *Tattling and Teacher/Child Relationships*

Children did sometimes use tattling in an apparent attempt to gain favourable attention from a teacher or classroom assistant, but not always. Often they were eager to return to the activity they had been engaged in before tattling, once the teacher had helped them to resolve a social problem. Adults in the preschool were typically quite responsive to tattling, unless they were very busy at the moment it took place. The general similarities between tattling in the preschool and tattling between siblings, discussed in Chapter 3, combined with the observations that children rarely reported adult behaviour, and rarely reported peer behaviour to other peers, point to the conclusions that some preschool children tend to view teachers (and other school staff) as surrogate parents, and that they use very different social cognitive strategies for dealing with parents and other adults than for dealing with siblings and other children. It would be worthwhile to design an experiment to test the effects of recipient design on the reporting of behaviour to various types of audience.

I hope that this chapter has conveyed a sense of the complexity and contextual variability of tattling in the preschool, as a counterpoint to the general patterns in tattling behaviour that were described in Chapter 3. Some of this complexity doubtless stems from the triadic structure of the tattling act. Sometimes, children used teachers as a resource to solve social problems with peers. At other times, they used peer behaviour as a resource to gain favourable attention (e.g., sympathy) from adults. These strategies do not necessarily conflict with each other, and it is likely that at times, both were in operation. Both types of strategy illustrate a sophisticated social cognitive understanding, in terms of children predicting how individual adults and peers will react to each others' behaviour.

5. EXPERIMENTAL STUDIES OF CHILDREN'S BEHAVIOURAL REPORTING

As discussed in the previous two chapters, this research was designed to integrate a mixture of methods, incorporating both qualitative and quantitative observation. The third strand of the research involved experimental work to test some of the hypotheses that were developed during the observational phase. An experimental study (Study 1) was first piloted in the second of the two preschools where observational research took place. A full experimental study (Study 2) was then developed from this pilot and deployed in other local schools. A variant of this study was then administered with slight modifications to the experimental materials. In the final part of this chapter, I outline some other experimental designs that could be used to test other hypotheses connected with the reporting of behaviour by young children.

5.1 Study 1

The quantitative observational research described in Chapter 3 revealed a significant bias in the reporting of peers' negative behaviour by preschool children, compared with positive or neutral behaviour (see especially Section 3.3.1). This bias has also been observed for sibling reports (den Bak & Ross, 1996; Ross & den Bak-Lammers, 1998), and has been noted in passing by several other authors (e.g., Skinner et al., 2000; M. E. Smith, 1932). This simple bias was chosen as the initial target of experimental study, because the idea of negative bias is central to the basic definition of tattling (see p. 37), and because adult gossip may not be biased towards

reports of negative behaviour (Dunbar et al., 1997), thus implying a developmental progression between the behavioural reporting of children and adults.

My initial hypothesis was that children would be more likely to report a third party's negative behaviour than their own negative behaviour, in an experimental situation. Conversely, they should be more likely to report their own positive behaviour than a third party's positive behaviour. Both these hypotheses are consistent with the theory that children are sensitive to behaviour that could affect their own and others' reputations. An initial pilot was run in which a vignette was acted out by an experimenter using play figures. Children were told that the figures represented themselves and a (named) third party. The play figure representing themselves either did something good or bad to the other figure, or was the recipient of the same action from the other figure. Children's spontaneous reactions to the figures' actions were recorded, and they were also prompted with questions about what the figures had done.

However, there were certain problems with this procedure: it was difficult to standardize the acting-out of the stories, and some children were quite unresponsive to the questions or were reluctant to play along with the definition of themselves as one of the characters in the stories. A simpler methodology was therefore devised. This was aimed at testing the hypothesis that if children are more likely to report the negative behaviour of peers, it is because they find such behaviour more *salient* than positive or neutral behaviour. If children find negative behaviour more salient and pay more attention to it, then they should also find it more memorable. The procedure used was inspired by the experiments of Mesoudi, Whiten, and Dunbar (2006). These authors used a transmission chain methodology to examine which story elements were remembered best, when stories were passed along in a chain

between participants by means of reading, recalling and then writing down what was recalled from the story (similar to a game of “Chinese whispers”). They found that *social* stories containing two characters were remembered better than *asocial* stories containing only one character; but, unexpectedly, that social stories in which negative or *antisocial* behaviour (such as adultery) took place were not recalled significantly better than social stories in which more innocuous events took place.

Since this finding seemed to contradict my hypothesis about the salience of the events reported by tattlers, I decided to find out whether an analogous result could be obtained for young children, using a simpler methodology. In order to investigate whether there was any relationship between performance in this experiment and frequency of tattling (along with other social variables), the experiment was run with children at Preschool B, towards the end of my period of observational research in that school.

5.1.1 *Aims*

The aims of Study 1 were as follows:

1. To test whether information about someone’s negative behaviour would be recalled better than information about someone’s positive or neutral behaviour.
2. To test whether information about two people’s social behaviour would be recalled better than information about one person’s individual, asocial behaviour.
3. To look for differences between young children’s and adults’ recall of social information, by comparing the results of this experiment with those of Mesoudi and colleagues (2006).

4. To look for relationships between children's recall of social information and other features of their social behaviour, especially in relation to their reporting of peers' behaviour. Specifically, I hypothesized that those children who were prone to tattling would be particularly sensitive to stories about antisocial behaviour, which would be reflected in their recall scores for these stories.

5.1.2 *Method*

Participants

The participants in Study 1 were 3- and 4-year-old children at an inner-city nursery school in Belfast, Northern Ireland (Preschool B from the observational research described in Chapters 3 and 4; see Sections 3.2.1 and 4.2 for full demographic and other background information about the school). The children ranged in age from 3;4 to 4;9 years, $n = 21$, $M = 4;3$ years, $SD = 4.0$ months. In all, 22 children participated in Study 1 (12 boys and 10 girls). However, the results for one girl, who was Chinese, were discarded because although she gave assent to the research, she did not give clear answers to any of the study questions. Of the remaining 21 children, 13 were from a Northern Irish ethnic background, 3 were Chinese, 1 Malaysian, 1 Nigerian, 1 Zimbabwean, and 2 were of mixed ethnicity (N. Irish / German and N. Irish / Spanish). Five children did not speak English as a native language, but seemed to comprehend the research materials well and answered the majority of study questions correctly. Informed, written consent was obtained from the parents or guardians of all participants before they took part in the experiment (see Appendix A).

Materials

The main experimental materials consisted of nine specially-made picture books. Each book contained twelve pages, alternating between six picture pages and six facing pages, with each of the facing pages containing two or three lines of text. Each picture was a photograph illustrating the activities of one or two play figures from the Early Learning Centre *HappyLand* range,³⁴ embedded in a scene consisting of objects (buildings, vehicles, etc.) from the same range. The text provided a verbal description of the activities which the figures were supposed to be engaged in. See Appendix D for the full text of all nine stories.

The picture books were divided into three sets of three. Each set comprised a story about *asocial* behaviour, a story about *antisocial* behaviour and a story about *prosocial* behaviour. One set of three stories was administered to each participant, with the order of the story *theme* (i.e., asocial/antisocial/prosocial) varied between participants. However, the *setting* of each story in order was always the same: the first story was always set during playtime at school, the second story in a café, and the third story in play vehicles. This meant that the differences in recall of each story theme could be examined on a repeated-measures basis, while controlling for order effects.

In addition to the picture books, the two figures which appeared in the photographs were taken into the experimental room, named with the same names given to them in the stories (“This is Alice; this is Boris”) and given to each child to hold, if they wished, for the duration of the experiment. Sheets of stickers were used

³⁴ See <http://www.elc.co.uk/toys/baby-toddler-toys/happyland/>, retrieved May 13, 2009.

to reward the children for their participation. All responses to the study questions were recorded on an Olympus digital voice recorder.

Procedure

The experiment always took place in a room known as the “Quiet Room,” which was off to one side from the main nursery classroom. This was an ideal space to use, for several reasons: it was separated from the main classroom by a glass screen, so teachers could easily see what was going on; the screen was soundproofed, so there was not (too) much background noise while the experiment was taking place; and the room served as the nursery library and was used for reading stories on a daily basis, so the children were well used to performing that sort of activity there. Before taking a child into the experimental room, the teacher or classroom assistant was informed which child was next (the order of participants and story themes was randomised), and verbal assent was sought from the child by asking them the question, “Would you like me to read you some stories in the Quiet Room now?” All participants indicated their assent, often enthusiastically: they knew me well from the time I had spent in participant observation, and it seemed that they enjoyed getting one-to-one attention from an adult.

Once each child was inside the Quiet Room, I asked him or her to sit down beside me and explained that I would be reading her three stories, asking her some questions after each story, and giving her a sticker when she answered each set of questions. I told her that she could leave the room whenever she wanted and return to the main classroom. (All participants chose to stay until the experiment was completed.) I showed her the voice recorder, explained that it would be recording her

voice, and switched it on. I gave her the two play figures, introduced the figures as “Alice” and “Boris,” and told her that the stories were about Alice and Boris.

I then opened the first book and read each page of text slowly, making sure that the participant was still sitting beside me, that she was looking at the pictures, and that she seemed to be listening to what I read. I gave minimal responses (usually “Yes” or “Uh-huh”) to any comments or questions that the participant made. Occasionally I repeated a page of text if a child seemed to be particularly distracted. At the end of each story, I said to the participant: “Now I’m going to ask you some questions about that story. Is that OK?” First I asked the participant an open-ended question: “Can you tell me what happened in that story?” If she answered this question I continued to prompt her with “What else happened?” until she had either recounted the whole story or was silent. This was followed by a set of structured questions, each of which was phrased in terms of two alternative answers, one correct and one incorrect (e.g., “Who finished their pizza first, Boris or Alice?”—refer to Appendix A for the full text of all the questions). The order of correct and incorrect answers was alternated between questions. Each participant’s answer was repeated back to her to ensure that it was what she had meant to say, and then the answer was recorded on an answer sheet which had checkboxes for the right and wrong answers (again, see Appendix A). If a participant gave an answer that was not one of the options given, I wrote down what she had said beside the appropriate question. Apart from repeating their answers back to them, no feedback was given to the children about their answers. At the end of each set of questions, I gave the participant a sticker before moving on to the next story. At the very end of the experiment, I stopped the voice recorder, thanked the child for participating, and asked her if she had any questions. (They very rarely did, other than: “Can I have

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another sticker?") Finally I led the child back to the main classroom, and let a staff member know that she had finished.

After the entire experimental run was over, a random sample of 11 out of 21 voice recordings were given to two graduate students who were unfamiliar with the experimental hypotheses or procedures. They were also given 11 answer sheets (in the same format as the originals) and asked to tick the box for the answer given, writing down the recorded answer if it was not one of the options given. Inter-rater reliability was 94.5%.

5.1.3 *Results*

Story Theme

As stated in the Method section, each participant answered a set of six structured questions about each of three stories. One story had an asocial theme, one an antisocial theme, and one a prosocial theme. The means and standard deviations of participants' scores (out of six) for each story theme are presented in Table 5 below. The scores were analyzed using a repeated-measures ANOVA. There was no effect of story theme, $n = 21$, Wilks's $\lambda = .89$, $F = 1.16$, $p = .34$. A paired-sample t -test of the specific hypothesis that antisocial actions would be recalled better than prosocial actions was closer to significance, but not by much, $n = 21$, $t = 1.27$, $p = .22$.

Table 5. *Descriptive Statistics for Recall of Story Elements across Story Themes in Study 1*

Story theme ^a	Mean score (max. 6)	Standard deviation
Asocial	5.00	1.05
Prosocial	5.00	1.19
Antisocial	5.33	0.66

^a $n = 7$ for each group

Story Order and Setting

As stated in the Method section (see p. 160), the order in which the three story themes were presented varied, but the order of the three story settings was always the same (*playtime*, then *café*, then *vehicles*). To find out if story order or setting was having a confounding effect on the results, participants' scores (out of six) across the three story settings were analyzed using a repeated-measures ANOVA. The means and standard deviations of the story settings' scores are presented in Table 6 below. There was a significant and strong effect of story setting, Wilks's $\lambda = .72$, $F = 3.61$, $p = .047$, partial $\eta^2 = .28$. Post hoc analysis using paired-sample t tests showed that most of this difference was due to the third story (set in the play vehicles) being recalled much better than the first story (set during playtime at school), $t = 2.74$, $p = .013$. However, there was also a trend for the second story (set in the café) to be recalled slightly better than the first one, $t = 1.91$, $p = .071$. A mixed between/within-subjects ANOVA found no significant interaction between story theme and the order in which stories were presented, Wilks's $\lambda = .74$, $F = 1.36$, $p = .27$.

Table 6. Descriptive Statistics for Recall of Story Elements across Story Settings in Study 1

Story setting ^a	Mean score (max. 6)	Standard deviation
Playtime	4.76	1.15
Café	5.29	0.96
Vehicles	5.38	0.74

^a $n = 7$ for each group

Relationships with Tattling and Other Social Behaviour

Bivariate correlations were carried out between both the total recall score and the ratio of recall-of-antisocial-events to recall-of-prosocial-events, on the one hand, and a variety of statistics obtained from the observational phase of the research, on the other. These statistics comprised the rate of reporting peers' behaviour; the percentage of true reports; the percentage of negative reports; the ratio of tattling to being tattled on; and the child's score on the PSBS-T relational aggression scale. None of these correlations reached significance, all $p > .2$.

In addition, correlations were carried out between children's scores on the different story settings, on the one hand, and on the other hand the absolute and relative frequency of their reports of incidents of property damage, property dispute and physical aggression. These correlations were carried out because the stories were designed so that each story was dominated by a particular kind of normative violation: the classroom story contained an incident of property damage (knocking over a tower of blocks), the café story an incident of property theft (taking a piece of someone else's pizza), and the vehicles story an incident of physical aggression

(bumping a car with someone inside it). None of these correlations approached significance, all $p > .3$.

Gender Effects

No main effect of gender was predicted on the total story recall score, and none was found: across the three stories (maximum total score = 18), girls, $n = 9$, $M = 15.7$, $SD = 1.30$, scored only slightly better than boys, $n = 12$, $M = 15.0$, $SD = 2.65$, and this difference was not significant, $t = 0.77$, $p = .45$, although Levene's test did find a significant difference in variances between sexes, $F = 4.47$, $p = .048$. Mixed between/within-subjects ANOVAs found no interactions between gender and story theme, Wilks's $\lambda = .83$, $F = 1.89$, $p = .18$, or between gender and story setting, Wilks's $\lambda = .95$, $F = 0.53$, $p = .60$.

Age Effects

No specific age effects were predicted. Nevertheless, non-parametric bivariate correlations were carried out between children's ages and their overall recall performance, as well as their performance on the various story themes and story settings. There was a slight trend for older children to perform better on the task as a whole, $n = 21$, Spearman's $\rho = .38$, $p = .092$. This relationship seemed to be driven by older children's better performance on the *café* story setting, $\rho = .58$, $p = .005$, and for the *antisocial* story theme, $\rho = .52$, $p = .017$. Older children also did marginally better on the *vehicles* story setting, $\rho = .42$, $p = .060$, and on the *asocial* story theme, $\rho = .40$, $p = .074$. One-way ANOVAs found no significant differences in the children's age distributions according to gender, condition (i.e., the order in which the story themes were presented), or whether the children were fluent in English, all $p > .3$.

Cultural Effects

Five participants in this study were non-native English speakers, and were judged by me not to be fluent in English.³⁵ Surprisingly, perhaps, proficiency in English had no effect on overall performance in the story recall task, $t = 0.99$, $p = .34$. However, it must be remembered that five non-fluent children is a very small sample, and that the child who was perhaps least proficient at English had to be excluded from the analysis (see p. 159 above). Recall studies with a larger sample size, or studies which looked for correlations between story recall performance and a standard English language comprehension test, might be more likely to find significant effects.

5.1.4 Discussion

This experiment found no support for either the hypothesis that antisocial stories would be recalled better than prosocial ones, or the hypothesis that social stories would be recalled better than asocial ones. Instead, the differing content of the stories and the questions asked—or perhaps the order in which the stories were presented—had a much stronger effect, which just about reached significance even in this small sample. It is difficult to say whether it was the broad theme of the stories that was responsible for this effect, or the specific questions that were asked. Since the last story was recalled the best, and the second story nearly as well, it could also be that children's poor performance on the first story was due to a novelty effect, and that their general performance improved as they gained more experience with the task demands. Whichever interpretation is taken, however, the repeated-

³⁵ One other child was ethnically Chinese, but both his parents had been brought up in Northern Ireland, and his English proficiency was on a par with that of most of the ethnically Northern Irish children.

measures nature of the experimental design made it harder to discern the true effect of story theme (i.e., whether the story concerned asocial, prosocial or antisocial behaviour). Any main effect of story theme was likely to have been swamped by the stronger effect of story setting. And since only seven participants were allocated to each combination of story theme and story setting, the observed power was only .22, meaning that this experiment was unlikely to detect any effect of story theme between groups. This was compounded by the fact that chance performance, on the questions for any one story, was 3 questions right out of 6, giving a very limited probable variation in correct scores from 3 to 6, with most participants scoring whole numbers in this range (indeed, only one participant scored less than this, with a score of 2.5 out of 6).

The only other effect that reached significance was the tendency for older children to do better on the stories that were set in the *café*, and also on those which had an *antisocial* theme. The former is perhaps not surprising given that the *café* story involved counting slices of pizza and cake. Clearly there will be many developmental differences in recall due to the complexity, script structure and logical ordering of the material to be recalled (e.g., Hudson & Nelson, 1983), and this was not of interest for the present study. Of more interest was the finding that older children were better at remembering antisocial stories. This could be due to a heightened moral sensitivity on the part of older children, and would be worth investigating properly with a series of between-groups experiments in which a group of, say, 3–4-year-olds were compared with a group of 5–6-year-olds.

In the sense that no significant differences were found between the recall of antisocial and prosocial information, these results might be taken to corroborate the finding of Mesoudi and his colleagues (2006) that adults did not recall gossip-type

information any better than more innocent social information. However, since I failed to find any evidence for these researchers' other main finding—that adults recalled social events better than asocial events—the sensitivity of my experimental measure must be called into question. Finally, no meaningful relationships were found between children's performance on this task and the social data that I had collected during the observational study in the same school. In particular, the hypothesis that frequent tattlers would be better at recalling antisocial information than other children was not supported. The general lack of relationships was disappointing, given my commitment to mixed-methods research, but due to the small sample size it was not entirely surprising.

5.2 Study 2

Given that story setting (or order) had much more effect on children's recall abilities than the asocial/antisocial/prosocial story theme that was the focus of investigation, I decided to run another experiment along similar lines, but in which all story variation was between groups—thus controlling for story setting and incidental content. There were also more questions in all (20 for each story theme) allowing for more variance in individual scores, from a chance performance of 10 correct answers to a maximum performance of 20. To compensate for the increased task demands of using longer stories with more questions, slightly older children (aged 4–5, rather than 3–4) were recruited.

5.2.1 Aims

The aims of Study 2 were similar to those of Study 1 (see Section 5.1.1): the only changes were methodological ones, designed to achieve a clearer picture of the effect

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of story theme on event recall. In addition, the fourth aim of Study 1 was not relevant to this study, since I had performed no observational research of the children who were recruited for the second study, and therefore I unfortunately had no opportunity to compare their story recall results with other aspects of their social behaviour.

5.2.2 *Method*

Participants

The participants in Study 2 were 4- and 5-year-old children at three primary schools in Belfast. At the time of the study the children ranged in age from 4;7 to 5;7 years ($n = 57$; mean = 5;2 years; $SD = 3.5$ months). The three schools were chosen to represent areas of differing cultural background and SES (socio-economic status): Schools C and D were (non-fee-paying) Catholic schools in the same, solidly working-class area, while School E was a private school which drew most of its (largely, but by no means exclusively, Protestant) intake from nearby middle-class areas. In addition, School E was mixed-sex, while Schools C and D were a girls' school and a boys' school respectively. In all, 57 children (26 girls and 31 boys) participated in Study 2. The majority of children came from an Irish (including Northern Irish) ethnic background. One child was from a Chinese ethnic background, but scored near the overall mean on the recall study. No results had to be excluded. Informed, written consent was obtained from the parents or guardians of all participants before they took part in the experiment (see Appendix A).

Materials

The main experimental materials consisted of six specially-made picture books. Each book contained 20 pages, alternating between 10 picture pages and 10 facing

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pages, with each of the facing pages containing two or three lines of text. As in Study 1, each picture was a photograph illustrating the activities of one or two play figures from the Early Learning Centre *Happy Land* range, embedded in a scene consisting of objects (buildings, vehicles, etc.) from the same range. The text provided a verbal description of the activities which the figures were supposed to be engaged in. See Appendix A for the full text of all six stories.

The picture books were divided into three pairs according to story *theme*: there was a pair of stories about one character's individual, asocial actions, a pair of stories about two characters' antisocial interactions, and a pair of stories about two characters' prosocial interactions. One pair of stories was administered to each of the participants, who were therefore divided into groups according to the story *theme* (i.e., asocial / antisocial / prosocial). The *settings* of the first and second stories in the pair were always the same: the first story was set in a café, followed by play vehicles; the second story was set during playtime at school, followed by a post office. Hence, the pictures used were the same for each story across the experimental conditions, with only the text being varied. This represented a methodological improvement on Study 1, for which I had used slightly different pictures (though in similar settings) to illustrate parallel events across different story themes.

As in Study 1, the two figures which appeared in the photographs were shown to the participant, named with the same names given to them in the stories ("This is Alice; this is Boris") and given to each child to hold, if they wished, for the duration of the experiment. Sheets of stickers were used to reward the children for their participation. All responses to the study questions were recorded on an Olympus digital voice recorder.

Procedure

In contrast to Study 1, for which I carried out data collection myself, data collection for Study 2 was performed by three undergraduate research assistants (one for each school) who were unaware of the experimental hypotheses or the results of Study 1, and who worked on a voluntary basis.³⁶ I recruited each assistant myself following a short interview. All had previous experience of working with children, but they also undertook a one-to-one training session, supervised by myself, with a child who was familiar with the experimental paradigm, and using the materials and procedure from Study 1. In addition, I ran through the materials and procedure for the current study before it began, highlighting the changes that had been made. The actual experiment took place inside each school in a room close to the classroom, where the assistant could be monitored by staff without being overwhelmed by noise. Verbal assent was obtained from each child before taking them out of the classroom.

The procedure was otherwise identical to Study 1 (see p. 161 above), except that there were now two books instead of three, and each book was ten pages long instead of six—leading to two sets of ten questions for each child. After the entire experimental run was over, I listened to a random sample of 14 out of 57 voice recordings made by the research assistants, filling in the answer sheets myself. Inter-rater reliability was 92.1%.

³⁶ Each assistant was paid a token sum to cover travel expenses, etc.

5.2.3 *Results**Story Theme*

As stated in the Method section above, participants answered a set of ten structured questions about each of two stories. Participants were divided into groups according to story *theme*, with each participant hearing a pair of stories about either asocial, prosocial or antisocial behaviour. The means and standard deviations of participants' scores (out of 20) for each story theme, summed across both stories, are presented in Table 7 below. The scores were analyzed using a one-way ANOVA, which showed a marginal effect of story theme, $F = 2.63$, $p = .081$. The partial eta-squared value for this test was .09, indicating a moderate effect size.

Table 7. Descriptive Statistics for Recall of Story Elements across Story Themes in Study 2

Story theme	<i>N</i>	Mean score (max. 20)	Standard deviation
Asocial	20	16.6	3.1
Prosocial	19	18.2	1.3
Antisocial	18	17.6	2.1
<i>Total</i>	<i>57</i>	<i>17.4</i>	<i>2.3</i>

A post hoc Tukey HSD test indicated that most of this marginal effect was due to the difference in mean scores between the asocial and prosocial conditions, which was slightly closer to significance than the difference between groups as a whole, $p = .068$. However, Levene's test showed that the variance across these conditions was not homogeneous, $F = 4.99$, $p = .010$. Dunnett's T3 post hoc test, which does not assume equal variances, found a much more marginal difference, $p = .099$. Although

the variance between the prosocial and antisocial conditions was much more homogeneous, Tukey's HSD found absolutely no difference in the mean scores between these conditions, $p = .66$.

A further hypothesis was that taken as a whole—by combining the prosocial and antisocial conditions—stories with a *social* theme would be recalled better than stories with an *asocial* theme. The combined mean score (out of 20) for the two social conditions was 17.9, $n = 37$, $SD = 1.7$, compared with 16.6 for the asocial condition. A one-way ANOVA found a significant effect of sociality, $F = 4.52$, $p = .038$, with a moderate effect size, partial $\eta^2 = .08$. Again, however, Levene's test showed that the variance between these two groups was heterogeneous, $F = 8.58$, $p = .005$. A t -test that did not assume equal variances found a much more marginal effect, $t = 1.82$, $p = .081$.

Story Order

The performance across the two stories within each thematic pair was remarkably similar. A repeated-measures ANOVA found very little difference between Story 1, $M = 8.72$, $SD = 1.32$, and Story 2, $M = 8.70$, $SD = 1.46$; $n = 57$, Wilks's $\lambda = 1.00$, $p = .93$. Indeed, participants' performance on these two scores was quite closely correlated, $r = .42$, $p = .0012$. I therefore felt justified in collapsing the data from each pair of stories to provide a single score (out of 20) for story theme.

Story Content

Superficially, the similar results between stories within each thematic pair were not encouraging for the hypothesis that children would be differentially sensitive to different types of transgressions. This was because in the antisocial condition, the two stories were about different transgressions: Story 1 contained instances of

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property theft (taking a slice of someone's pizza) and *physical aggression* (bumping into someone in a car), while Story 2 contained instances of *property damage* (knocking over a tower of blocks) and *social convention* (putting a stamp on a letter). However, a paired-sample *t*-test on the results from the antisocial condition alone showed that in the antisocial condition, Story 2, mean score = 8.22 out of 10, *SD* = 1.22, was recalled significantly better than Story 1, *M* = 9.33, *SD* = 1.24; *n* = 18, *t* = 3.56, *p* = .002. (There was still a trend for individuals' scores on the two stories to correlate in this condition, *r* = .42, *p* = .085, as was found for the experiment as a whole.) To try to uncover what was causing these differences, I looked at the percentage of children who were answering each question correctly. The percentage of correct answers for the four questions which specifically asked children to recall Alice's norm violations were all within one standard deviation (11.3%) of the mean percentage of correct answers (87.8%) across all questions in this condition (see Table 8 below). Hence, if the difference in story recall in this condition was caused by the differing nature of the norm violations in Story 1 and Story 2, the effect was manifest through a heightened recall of Story 2 as a whole, rather than of the specific norm violations taking place in Story 2.

Table 8. Percentage of Correct Answers Given for each Question Relating to a Norm Violation

Question	Correct answer	Incorrect answer	Proportion answering correctly
Did Boris give Alice a slice of pizza, or did she grab it off him?	Alice grabbed it.	Boris gave it.	.78
Did Alice crash into Boris's motorbike, or did Boris crash into Alice's car?	Alice crashed.	Boris crashed.	.83
Did Charlie's tower fall down by itself, or did Alice knock it down?	Alice knocked it down.	It fell down by itself.	.89
What did the lady tell Alice that she had to do?	Put a stamp on her letter.	Wrap up presents.	.94

Gender Effects

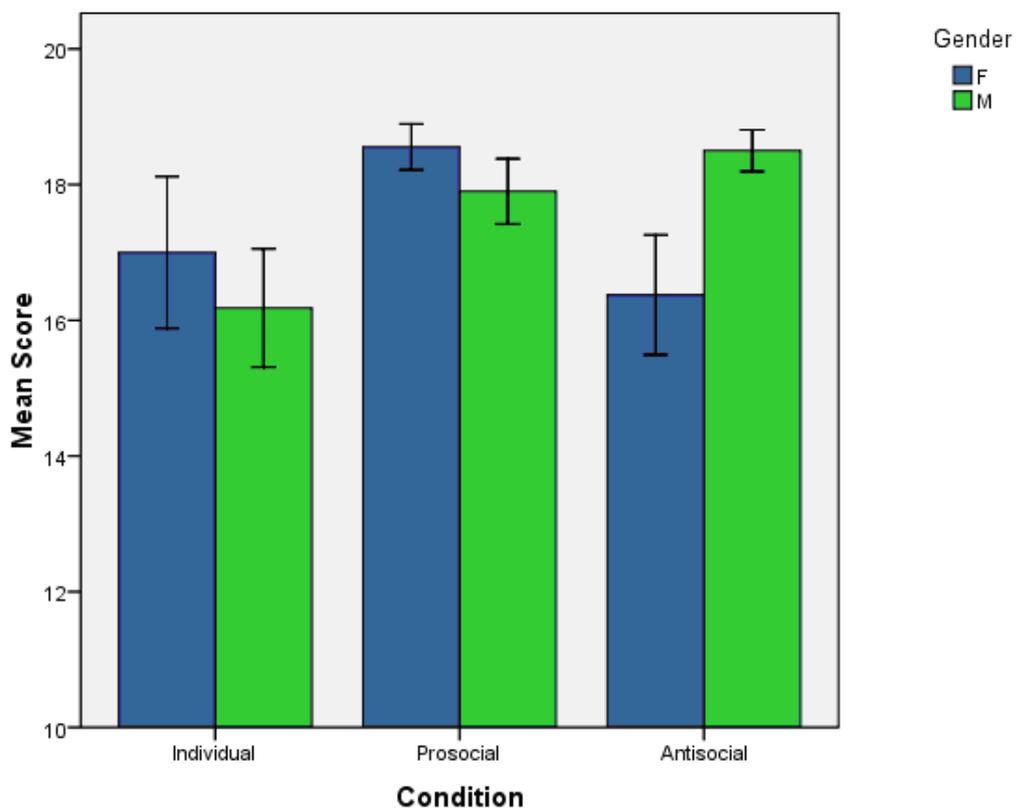
No main effect of gender was predicted on the story recall score, and none was found, $t = 0.22$, $p = .83$. However, there was a trend towards an interaction between gender and story theme, $F = 2.50$, $p = .092$. Post hoc HSD analysis revealed, surprisingly, that the antisocial stories were recalled better than the two other sets of stories by boys, but *worse* than the other two sets of stories by girls. These comparisons reached significance when comparing antisocial with asocial stories for boys, mean difference = 2.3, $p = .013$, and approached significance when comparing antisocial with prosocial stories for girls, mean difference = -2.2, $p = .084$.

Conversely, *t*-tests on the data within each condition showed that boys recalled the antisocial story better than girls, $t = 2.48, p = .025$. The descriptive statistics for these analyses are summarized in Table 9 and Figure 5 below.

Table 9. Comparison of Performance between the Three Story Conditions for Girls and Boys

Condition	Girls			Boys		
	Mean	SD	<i>N</i>	Mean	SD	<i>N</i>
Asocial	17.0	3.4	9	16.2	2.9	11
Prosocial	18.6	1.0	9	17.9	1.5	10
Antisocial	16.4	2.5	8	18.5	1.0	10

Figure 5. Comparison of participant performance between genders across the three story conditions, $n = 57$. Error bars represent $\pm 1 SE$.



Site Effects

There was no main effect of the school where the research was carried out on participants' recall scores, and no interaction between site and story theme, both $p > .1$.

Age Effects

No specific age effects were predicted. A non-parametric bivariate correlation found no relationship between participants' age and their recall performance, Spearman's $\rho = .11$, $p = .42$, $n = 53$. There were also no significant correlations in this measure when the data was split into sub-groups according to story theme, or when only girls were considered; however, older boys did seem to perform better than their younger peers, Spearman's $\rho = .43$, $p = .019$.

5.2.4 *Discussion*

Like Study 1, this study found no evidence that children recall antisocial information any better than prosocial information. Due to the larger number of participants in this sample, and the use of a more internally valid experimental paradigm—using exactly the same pictures across story themes—I can be more confident that a real effect would have been detected if it were present. However, the observed power for the ANOVA on story theme was only .50; much higher than in Study 1, but still relatively low by established standards.

There were two further problems with using this study to test the hypothesis about negative bias in information recall. Firstly, performance in the *prosocial* and *antisocial* conditions (though not in the *asocial* condition) was almost at ceiling, with about half the participants in each condition getting at least 18 questions right out of 20. Ceiling effects would make it much more difficult for a significant

difference between these two conditions to emerge in the data, without testing many more participants. Secondly, there was a trend for girls in this study to perform *worse* with the antisocial stories than with the prosocial stories, and they performed significantly worse than boys on this story theme. It is possible then that some sort of gender effect was depressing girls' scores in the antisocial condition, but not the other conditions, and therefore masking any positive effect of the antisocial condition on story recall.

The second hypothesis, that social events would be recalled better than asocial events, received qualified support from this study. When data was collapsed across the prosocial and antisocial conditions, there was a significant effect of story sociality on the recall score. However, it did seem that this effect might have been partly due to the significant difference in variance between the scores for the three conditions, as there was only a marginal trend towards better recall of social stories if equal variance was not assumed. In other words, the difference in scores seems to have been caused mainly by several individuals in the asocial condition achieving unusually low scores, rather than by the entire spread of scores being shifted downwards (note that 5 out of 20 participants in the asocial condition scored 15 or less out of 20, whereas only 1 out of 37 participants in the other two conditions scored 15 or less). This may have been an artefact caused by the presence of a number of children with unusually poor story recall skills in the asocial group; but perhaps more likely is that performance in the asocial condition was depressed for certain individuals but not for others.³⁷ Furthermore, the difference between recall of

³⁷ A similar variance effect was found in an online study of adults' recall of celebrity gossip stories, which compared recall of asocial stories with antisocial and neutral social stories (J. R. Piazza & G. P. D. Ingram, unpublished data).

asocial and social stories may have been weakened by the poor performance of some of the girls in the antisocial condition. Given this gender effect, I carried out some further post hoc tests on story sociality. The effect of story sociality was more significant—even though there were fewer participants—if only the social and prosocial conditions were compared, $t = 2.23$, $p = .035$, or if only boys' scores were analyzed, $t = 2.20$, $p = .048$.

The results of this study—showing that stories about social events are recalled better than stories about asocial events, but that stories about antisocial events are not recalled better than stories about prosocial events—are broadly in alignment with Mesoudi and his colleagues' (2006) transmission chain results for adult participants. A bias towards social information apparently is present from the age of 4 or 5 years, at least for certain individuals (the ones whose recall was particularly poor in the social condition). However, given the anomalous results for girls in the antisocial condition, a follow-up study is required, in order to try to isolate and control for the effects of gender (of both participants and characters) on story recall.

5.3 General Discussion

The two studies described in this chapter were highly exploratory. Their main aims were to develop new methods in the study of attentional biases in children, and to relate preliminary findings in this area to the little that is known about corresponding biases in adults. At a methodological level, it is clear that story recall is influenced by many different factors which are difficult to predict in advance, including the gender of the characters and specific details about their actions. Experiments in this area need to be very tightly controlled in order to make certain that any effect is being caused by the putative experimental manipulation and not by a confound; and

gender and age effects need to be carefully tested for. Some progress was made in terms of making the experimental design more robust for Study 2, compared to Study 1, but more work needs to be done in developing a program of research in this area. An encouraging sign is that the lack of repeated-measures effects between the stories in Study 2 seemed to indicate that order effects were not too much of an issue—there were probably other reasons why the first story was not recalled well in Study 1—and this may make it slightly easier to come up with future designs.

The results of Study 2 were broadly in line with work on adults suggesting that social information is recalled better than asocial information, but that social information relating to norm violations is not recalled any better than more innocent social information (Mesoudi et al., 2006). However, this finding superficially contradicts the results of O’Gorman, Wilson, and Miller (2008), who showed that undergraduates tended to recall incidents from an unfamiliar culture better when they were phrased in terms of norm violations than when they were phrased merely in terms of something unusual happening. One possible explanation is that adults pay more attention than children to norm violations; but given the results of Harris and Núñez (1996) on deontic reasoning in children of a similar age to those in the current study (as reviewed in Section 2.3.2 above), this does not seem very plausible. Alternatively, it is noticeable that the effect size found by O’Gorman and colleagues was quite small, so this underlines the importance of using a tightly controlled and highly sensitive repeated measures design. Recall effects in general can be quite ephemeral and hard to detect, as demonstrated by recent debate over whether faces of cheaters are recalled better than faces of innocent or trustworthy individuals (compare Mealey, Daood, & Krage, 1996, with Mehl & Buchner, 2008, and

Buchner, Bell, Mehl, & Musch, 2009). Again, this highlights the need for developing a systematic program of research when researching human recall abilities.

5.4 Future Study Designs

In an exploratory area of research such as children's reporting of behaviour, many possible lines of investigation are opened up, not all of which can be followed to their conclusion in the time available. Part of my aim in investigating children's reporting of peers' behaviour was to build a systematic program of future research. This would include longitudinal and cross-cultural investigations, but the plans for these are not described in detail in this thesis (though they are briefly sketched out in the concluding remarks in Chapter 7). On the other hand, three planned experimental studies follow on quite naturally from the observational and experimental research that I have already completed, and these three studies will be conducted in the near future. The detailed plans for these studies are described in this section.

5.4.1 Study 3: Controlling for Character Gender

As described in Section 5.2.4 above, there may have been a gender-related confound in the results from Study 2, in that girls recalled the antisocial stories worse than boys, and also recalled the antisocial stories worse than the prosocial stories. I suspect that this may have been because the girls' memory of the main character's antisocial actions was inhibited, since the main character in the Study 2 stories was always female. Hence, in Study 3, I will perform essentially the same experiment, but with a male main character instead of a female one.

Participants

Due to the amount of time elapsed between studies and the possibility of priming effects, a different participant pool will be used. Different schools will also be used so as not to exhaust the first set of schools' goodwill, but the schools chosen will all be in Belfast and will be situated near the schools that were chosen for Study 2. Children will be the same age as in Study 2 (Primary Year 1; i.e., 4–5 years old) to allow direct comparison of the results.

Materials

Once again, participants will be divided into three conditions based on the story sets that are read to them. The stories used will be identical to the stories used in Study 2, except that the roles of the female and male characters (Alice and Boris) will be reversed, via a simple text substitution, on every page that they appear. The pictures used will be as close as possible to the pictures used in the Study 2 stories, but again with the male and female characters swapped around.

Procedure

In all other respects, the procedure will be identical to the procedure used for Study 2 (see p. 172).

Hypotheses

This study will test the following experimental hypotheses:

1. The null hypothesis is that the gender of the main character in the stories will have no effect on the different genders' recall of the stories.
2. Hypothesis H_1 will postulate an interaction between character gender and participant gender, such that:

5. *Experimental Studies of Behavioural Reporting*

- a. Boys will recall prosocial stories better than they recall antisocial stories, when the main character is a boy
 - b. Girls will recall antisocial stories better than boys do, when the main character is a boy.
3. Hypothesis H_2 will postulate that when the interaction between character gender and participant gender is controlled for, by analyzing data from both Study 2 and Study 3, there will be a main effect of story condition, such that antisocial stories and prosocial stories are both recalled better than asocial stories.

5.4.2 *Study 4: Recall of Normative Information*

Although Study 3 will address a major weakness of Study 2, by controlling for the interaction between character gender and participant gender, there may still be doubts about the validity and sensitivity of this paradigm, since the test is carried out between subjects and the range of possible scores is not high. Furthermore, there were other differences between the events in the stories used, apart from the presence of asocial, antisocial or prosocial actions, which may have confounded the results.

To address these concerns, I plan to carry out a fourth study which will draw heavily on the methodology used by O’Gorman and colleagues (2008) in their recent study of the recall of normative information by adults. These researchers used passages of text about unfamiliar (to Western populations) cultural activities, taken from Firth’s (1957 [1936]) famous ethnographic study of the Polynesian island of Tikopia. The text was varied between conditions such that exactly the same actions were described, but the *reason* for performing them was ascribed either to some kind

of social custom or norm, or to some other reason such as personal preference. The normative and non-normative reasons were alternated and counter-balanced so that each participant received an equal mix of each type of reason, allowing for a within-subjects test of whether participants recalled certain items of information better when they were presented as being either in accordance with, or in violation of, a particular social norm.

For Study 4, the within-subjects design of O’Gorman and his colleagues (2008) will be adapted for testing with children, using more child-appropriate materials. Instead of presenting a passage of text about life in another culture, children will be read a story (with pictures) about incidents at a fictitious school, complete with normative and non-normative reasons why the incidents took place. It is common for children to be asked questions about appropriate behaviour when carrying out experiments based on the moral/conventional paradigm (see Helwig & Turiel, 2002; Turiel, 1983, 2006) so examples of incidents for these stories will be based on the materials used in moral/conventional studies.

Participants

To test for developmental differences, children from at least two different age groups will be recruited: Primary Year 1 (4–5 years) and Year 3 (6–7 years). Children from an older age group may also be included if significant differences are found between Year 3 and adult performance.

Materials

Two stories will be produced, each describing exactly the same events and containing a mixture of normative and non-normative explanations of these events, but varying as to the specific events within the story to which normative or non-

normative explanations are applied. Stories will be set in a fictitious school. A series of pictures will be produced to illustrate each story, and these will be exactly the same between conditions. The materials will need to be shorter than in O’Gorman et al.’s (2008) study; but so as not to reduce the sensitivity of the experiment, 30 questions will still be asked about each story. This will be achieved in three ways. Firstly, each story will be split up into three parts, and 10 questions asked after the end of each sub-story, rather than all 30 questions being asked at the end. Secondly, the number of non-salient paragraphs (18 out of 30 in O’Gorman et al.’s study) will be greatly reduced. Thirdly, the size of each paragraph (salient or non-salient) will also be reduced.

Procedure

Aside from the difference in materials, the procedure will be very similar to Studies 2 and 3. An experimenter will interview each participant individually and read them the set of three sub-stories in turn, asking ten multiple-choice questions at the end of each sub-story, to test their recall of each individual frame in the stories. Children may also be asked to rate the importance of each frame (as in O’Gorman et al., 2008, Experiment 3).

Hypotheses

This study will test the following experimental hypotheses:

1. The null hypothesis is that there will be no within-subject differences between recall of events that have a normative explanation attached, and events that have a non-normative explanation.

2. Hypothesis H_1 will postulate that events that have a normative explanation attached will be recalled better than events that have a non-normative explanation.
3. Hypothesis H_2 will postulate that, while older children will recall the stories better than younger children, there will be no interaction between children's age and the strength of their recall of normative versus non-normative events.
4. Hypothesis H_3 will postulate that if the importance of the events in the stories is rated, its effect on recall will be weaker than the effect of normativity, and there will be no interaction between these two variables.

5.4.3 *Study 5: Reaction Formation*

In Freudian psychoanalysis, *reaction formation* is the process by which the suppression of a powerful, anxiety-causing emotion leads to the expression of an antithetical emotion (see Baumeister, Dale, & Sommer, 1998). More specifically, a secret desire for some kind of “forbidden fruit” may lead an individual to express hostility to the idea of performing the forbidden action.³⁸ It is easy to find a rationale for reaction-formation behaviour in terms of reputation management and competitive cooperation. Condemning the norm violations of others may be a good way to disguise similar violations committed by oneself. Furthermore, for many kinds of transgression (e.g., adultery, embezzlement) it makes evolutionary sense that individuals who are trying to deny them to themselves should also deny them to others, in order to ensure that these others do not gain a relative selective advantage (Krebs & Denton, 1997).

³⁸ Male homophobia may sometimes be a good example of this process: Adams, Wright, and Lohr (1996) found that homophobic, outwardly heterosexual men were more sexually aroused by male homosexual erotica than were non-homophobic heterosexual men.

5. *Experimental Studies of Behavioural Reporting*

Tattling—the reporting of a peer’s proscribed behaviour to a third party—would seem to be a good medium for investigating the development of reaction formation in children. This is because tattling is an everyday behaviour for many young children, and it consists, by definition, of the expression of hostility to a transgression. In this subsection I outline a preliminary design for an experiment to test the hypothesis that, due to reaction formation, those children who are most likely to commit a particular transgression are also the most likely to report it in others.

Participants

This experiment will be performed with participants from young to middle childhood. Ideally, at least two groups of children aged 5–6 years and 7–8 years, along with possibly a third group aged 9–10 years, will take part. Tattling is common in the first two age groups (Ross & den Bak-Lammers, 1998; Skinner et al., 2000), but probably becomes socially proscribed by the latter age. These age groups have been chosen in order to investigate a possible relationship with the development of second-order theory of mind, which is thought to arise between the ages of 6–8 (Perner, 1988; Perner & Wimmer, 1985), and which has been postulated to be of key importance in the origins of reputation management in children (Ingram et al., 2009). Initial participants will most likely be recruited from schools in the Belfast area. Their parents or guardians will be asked for informed written consent, and the children themselves will be asked for informed verbal assent, and instructed that they can withdraw their assent at any time.

Materials

The experiment will take place in a laboratory. The room will contain a table with three play objects on it: a football, a doll, and a handheld computer game.

Another table, on the other side of the room from the first table, will be covered with miscellaneous official-looking documents and pens. The child will be seated at an easel and provided with paper and crayons. All experimental sessions will be video-recorded, and rated by an independent coder.

Procedure

A tentative procedure for this experiment is as follows (subject to changes following proper piloting):

1. When the child enters the room, they will be left to themselves for 2 minutes, while the experimenter talks to their parent/guardian at the second table.
2. If at any point during those 2 minutes, the child touches one of the objects on the first table, the experimenter will explain to them politely but firmly that the objects on the table are not allowed to be touched.
3. If the child has not touched any of the objects on the table at the end of 2 minutes, the experimenter will tell them at this point that they are not allowed to be touched.
4. The experimenter will ask the child to draw a picture of the object on the table that they would most like to play with.
5. When the child has finished their picture, the experimenter will talk to the parent/guardian at the second table again, with their faces turned away from the first table (e.g. while examining some papers).
6. A confederate child will enter the room and touch one of the objects. In half of all trials, this will be the object chosen by the participant child; in the other half, it will be one of the other two objects (the confederate child will be

instructed which object to touch by their own parent, who will be watching the procedure on CCTV).³⁹

7. The dependent measure will be any verbal description by the participant child (in the ensuing 1 minute) of what the confederate child has done.

Hypotheses

This study will test the following experimental hypotheses:

1. The null hypothesis is that there will be no significant variation in the amount that the confederate child's behaviour is reported, depending on which object they touched or whether the participant touched an object themselves.
2. Hypothesis H_1 will postulate that participants will be significantly more likely to report the confederate child's behaviour if they were "guilty" of touching a forbidden object themselves.
3. Hypothesis H_2 will postulate that participants will be significantly more likely to report the confederate child's behaviour if the latter touches the object that the former most wanted to play with.

5.5 Conclusions

The experimental studies carried out so far raise more questions than they answer. This is perhaps to be expected in an exploratory area of research such as this one. Nevertheless, substantial methodological progress has been made in designing and running experiments that are capable of investigating children's recall and reporting

³⁹ Alternatively, the confederate child may themselves be shown on video, but the participant may be misinformed that he or she is watching the confederate on CCTV. This would have the distinct advantage of ensuring a strictly controlled performance from the confederate child.

of different kinds of events. The work of O’Gorman and colleagues (2008) suggests ways in which this methodology could be tightened further, in Study 4.

For the moment, the results reported in this chapter provide very tentative support for the findings of Mesoudi and colleagues (2006) that counter-normative actions are not recalled better than more innocent actions, but that social actions are recalled better than asocial ones. Follow-up work with sufficient statistical power will allow investigation of whether actions where a norm is explicitly invoked (as in O’Gorman et al.’s study) are recalled any better than actions where the norm violation is implicit (as in Mesoudi et al.’s study). The quantitative observational results reported in Chapter 3 and the qualitative results reported in Chapter 4 suggest several further possible avenues for experimental investigation—including a focus on reaction formation, in Study 5, which might help to explain individual differences in tattling and related verbal behaviour.

Assuming, for the moment, that the experimental findings from Study 2 are correct, and that there are no differences in recall of prosocial and antisocial behaviour, what could be the source of the negative bias in children’s peer reporting revealed by my quantitative observational study? It seems likely that this bias in verbal reporting has a strategic source and is the result of a confluence of various motivations, as set out in Section 4.4.4, rather than a simple attentional bias. This alternative hypothesis is discussed further in Section 7.1 of the Conclusion.

6. A CROSS-CULTURAL INVESTIGATION OF TATTLING AND GOSSIP

Modern evolutionary theories of human behaviour tend to be highly sensitive to the influence of culture, at least in contrast to earlier, much-criticized approaches such as sociobiology. Recent examples of this cultural sensitivity include Richerson and Boyd's (2005) model of cultural group selection; Tomasello's (1999, 2008) account of the elaboration of symbolic culture by means of shared attention and the "ratchet effect;" and Greenspan and Shanker's (2004) ideas about the evolution of language and intelligence through shared emotional signalling. The theoretical importance of culture implies that cultural variation should be taken into account when designing empirical research that is inspired by evolutionary theory. This does not mean that before the behaviour of a particular population can be claimed as representative of human behaviour, the patterns found must be replicated across all major cultural groupings, or even a representative sample of them: behavioural patterns discovered in one culture can be hypothesized as universal, if it is theoretically reasonable to do so, and this hypothesis subjected to potential falsification in other cultural settings. Rather, the fact that all human social behaviour occurs in a cultural context entails that there is no such thing as generally adaptive social behaviour, independent of culture: human social behaviour is generally adaptive only to the extent to which human cultures are generally invariant (which is a significant extent; see Brown, 1991). Evolutionary research thus needs to be sensitive to the ways in which what

6. *Cross-Cultural Investigation of Tattling and Gossip*

counts as adaptive behaviour can vary between cultural settings, and this sensitivity should be factored into the design of a research program whenever possible.

Having just argued for the importance of a sensitivity to cultural variables, it must be admitted that there was not much scope for examining broad patterns of cultural variation in the current study: although there was some cultural variation between the five school populations studied, they were all located in the same city. However, given the exploratory nature of my research topic, it was appropriate first to obtain a picture of the natural range of children's reporting of behaviour within a single cultural setting. This follows the principle that in testing a hypothesis cross-culturally one should gradually widen the level of cultural distance involved. Accordingly, the first part of this chapter examines the similarities and differences between the populations studied in Chapter 3 and a population living in a different part of the UK and observed in the differing cultural setting of the home rather than the school, as revealed through the CHILDES database of children's language transcripts. The second part explores how cross-cultural data from ethnographic databases such as the Human Relations Area Files (eHRAF) can be used to investigate everyday verbal activities such as tattling and gossip. Throughout this chapter, even more than in the rest of the thesis, the emphasis is on laying the foundations for future research, which should involve new, empirical cross-cultural research in which data is collected, using isomorphic methods, from widely varying cultural settings.

6.1 Use of Naturalistic Conversation Transcripts from CHILDES

The Child Language Data Exchange System (CHILDES) is the child language component of TalkBank, a system for sharing and studying conversational interactions.⁴⁰ CHILDES consists of a database of transcripts of conversations involving children, recorded by many independent researchers at various times in the last 40 years, in 32 different languages and across a variety of formal and informal school, home, experimental and clinical settings (MacWhinney, 2000; MacWhinney & Snow, 1985). Psychologists interested in cognitive development have used the analysis of transcripts available on CHILDES to investigate a range of topics relevant to the present research, including children's understanding of the mind (Bartsch & Wellman, 1995), their understanding of emotions (Wellman, Harris, Banerjee, & Sinclair, 1995), and their developing moral discourse (Wright & Bartsch, 2008).

Given the wide diversity of languages and cultures represented in CHILDES, it might in principle be possible to use CHILDES (or similar corpora) to examine the cultural variability of the characteristics of peer behavioural reporting described in Chapter 3. However, since I lacked either the necessary language skills to conduct a comparative study using non-English-language data, or the time to develop such skills, the aim of the present study was more modest: simply to show that some general quantitative characteristics of behavioural reporting can be delineated in a population using transcript analysis alone. In addition, since the population whose

⁴⁰ See <http://talkbank.org/> and <http://childes.psy.cmu.edu/>, both retrieved May 13, 2009.

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transcripts were eventually chosen for study lived in a different part of the UK and came from a different generation to that which took part in the observational study, it might be expected that it would exhibit minor cultural differences from the latter population. Effectively, then, this was a pilot study intended to pave the way for more substantial future work (perhaps with collaborators) investigating cross-cultural similarities and differences in tattling.

6.1.1 *Method*

After reading the metadata and scanning sample text for all 62 of the corpora in the *Eng-UK/* and *Eng-US/* sections of CHILDES, the *Eng-UK/Wells* corpus was selected for analysis. This material was collected in the mid-1970s by Gordon Wells (1981) as part of the Bristol Study of Language Development, a comprehensive and highly influential study of how children learn to talk, covering the entire period from infancy to primary school. The Wells corpus was chosen because it was based on an extremely naturalistic observational paradigm: the 32 children in the study were each fitted with a voice-activated recorder in the home for one day every three months between the ages of 1;6 and 3;6 years,⁴¹ allowing the observation of natural language in everyday settings with minimal intrusiveness. There was also a small amount of helpful context in each transcript, providing details of the speakers' family relationships and the activities that they were engaged in at the time of recording.

The method used to analyze the Wells transcripts was based on the event sampling methodology used in my own observational study (described in Section 3.2.2). Three full days' transcripts from time points 3;0, 3;3 and 3;6 for each of the

⁴¹ A one-day follow-up visit for some children was made at various points between 4;6 and 5;0 years.

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32 children in the corpus were scanned,⁴² and certain events were identified. An event was defined as an instance of a child referring to an action by a third party, either to recount something that the third party did or to ascribe some property to the latter. Certain properties of each event were noted, in line with the properties that were described for the event sampling in the observational study: the age of the child at the time the event took place; the category of person referred to, whether parent, sibling, peer or other, and whether they were explicitly named; the audience of the locution; the person most affected by any reported behaviour, which was defined as either the tattler themselves, the audience, a third party, or nobody in particular; the free-text content of the tattler's report; and a free-text description of the audience's response to the event. Other properties which were used in the observational study, such as the truth value of the report and whether the audience witnessed the reported behaviour, were omitted here since the audio recordings lacked the necessary context. On the other hand, the comprehensive nature of the transcripts made it possible to compare tattling on peers to other forms of discourse, such as describing a parent.

As in the observational study, events were assigned to one of ten content types according to whether they referred to an instance of physical aggression, property damage, property entitlement, social convention, joint play, taunting, deception, disagreement, neutral behaviour (non-judgemental reports), or positive behaviour. An additional category was used for events that were purely *descriptive* in form (e.g., "He's crap"). Responses to children's reports were assigned to one of seven

⁴² The follow-up transcripts were also included for the 17 children for which these are present. The age range (3;0 to 5;0) was thus comparable to the age range for my observational study (3;1 to 4;10), although it was a little broader and biased towards the lower end of the age range.

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categories: supporting, acknowledging, excusing, ignoring, reprimanding for the act of reporting, reprimanding both, or questioning. See Section 3.2.2 for definitions of both the content and the response types, Appendix A for examples of the content categories, and Appendix B for examples of the response categories.

6.1.2 *Results*

Because of the limited amount of contextual data available in the recordings, only four of the main themes of the observational research (as described in Section 3.1) were available for investigation in this part of the study. These were the overall negativity of children's reports; the main content types of the transgressions that were reported; whether children reported transgressions that had happened to themselves more than transgressions that had happened to others; and the types of responses that audiences made to children's reports. For the themes of negativity and egocentrism, in addition to the gross descriptive statistics, I also break down the results in terms of the category of person whose behaviour is reported, which allows a comparison of the reporting of peers' behaviour with the reporting of other types of people's behaviour.

Negativity

Out of 114 events extracted from the Wells transcripts, 36.8% were negative, 55.3% were neutral, and only 7.9% were positive. An analysis of negativity by relationship with the subject of the report is presented in Table 10 below. It is noticeable that the proportions of reports that were negative were slightly higher for siblings and peers than for the various types of adults whose behaviour was reported. Although this difference was not quite significant when considering all the cells in Table 10, $\chi^2 = 15.6$, $p = .11$, it was significant when performing a simple 2 x 2 chi-

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squared test which combined some of these categories of people, and compared whether children were more likely to make negative or non-negative remarks about adults or children, $\chi^2 = 5.20, p = .032$.

Table 10. Proportions of Report Valences about Different Types of People

Relationship	Frequency	Negative	Neutral	Positive
Parent	23	.30	.48	.22
Sibling	30	.47	.50	.03
Baby	17	.41	.59	0
Other adult (non-parent)	13	.15	.69	.15
Peer (non-sibling child)	13	.46	.46	.08
Unknown relationship	18	.33	.67	0
<i>Total</i>	<i>114</i>	<i>.37</i>	<i>.55</i>	<i>.08</i>

Topics of Tattling

Once neutral reports (31% of the total), descriptive reports (27%) and positive reports (8%) had been excluded, only classic examples of tattling—defined as the reporting of negative behaviour—remained. The proportions of the various categories of tattling out of the total that remained (39 events) are listed in Table 11 below. No incidences of deception or disagreement were reported. The numbers in Table 11 were too small to obtain a meaningful cross-tabulation with the types of people whose behaviour was reported.

It is also noteworthy that with descriptive reports excluded—again, more closely approximating the conditions for event-sampling in the observational study reported

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in Chapter 3—far more of the sample consisted of negative reports: 38 out of 83 events (46%) for all report subjects, and 20 out of 33 events (61%) when only reports of peers' or siblings' behaviour were considered.

Table 11. Topics of Tattling (for Negative Reports of Behaviour)

Transgression type	Frequency	Proportion
Physical aggression	4	.10
Property damage	6	.15
Property entitlement	9	.23
Social convention	14	.36
Joint play dispute	5	.13
Taunting	1	.03

Egocentrism

Since descriptive reports, by definition, do not involve an action recipient, these reports were excluded from the analysis of whether children were more likely to report actions which had happened to themselves. Nevertheless, by far the commonest types of reports were those which had no particular recipient of an action (47 out of 83 events, or 57%).⁴³ The only other category of reports with a non-negligible frequency was where the child reported something which had been done to themselves (37%). Children only rarely reported things which had been done to their audience (2%) or to a third party (4%). A cross-tabulation of the recipient of the

⁴³ The number of events is lower in this sample than in Table 10, because for 31 events, it was not clear who the action recipient had been.

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reported action and the relationship with the subject of the report is presented in Table 12 below.

Table 12. Proportions of Reports (for each Subject Type) Describing Actions Performed on Various Categories of Recipients

Subject of report	Frequency	Action recipient			
		Nobody	Self	Audience	Third party
Parent	19	.53	.37	.05	.05
Sibling	22	.64	.36	0	0
Baby	9	.67	.33	0	0
Other adult (non-parent)	11	.46	.36	.09	.09
Peer (non-sibling child)	11	.55	.36	0	.09
Unknown relationship	11	.55	.45	0	0
Overall	83	.57	.37	.02	.04

As can be seen from Table 12, the egocentrism of reports did not vary greatly according to the type of person whose behaviour was being described, $\chi^2 = 8.35, p = .91$. I also analyzed whether children's negative reports were more likely to refer to transgressions of which they themselves were the victim, as I had found in the observational study reported in Chapter 3:

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Table 13. Proportions of Reports (for each Valence) Describing Various Recipients of the Reported Action

Valence of report	Frequency	Action recipient			
		Nobody	Self	Audience	Third party
Negative	38	.45	.53	0	.03
Neutral	36	.81	.11	.03	.06
Positive	9	.11	.78	.11	0

A chi-squared test on this data revealed that there was a highly significant relationship between the valence of a report and the recipient of the action described in the report, $\chi^2 = 25.4$, $p = .0003$. It is clear that negative reports were much more likely to be egocentric than neutral reports. Put another way, egocentric reports were much more likely to be negative: in 20 out of 31 events (65%) where a child described something that someone else had done to them, the action performed was negative.

Audience responses

Across all 109 events (excluding 5 which had a missing or inaudible response), the most common kind of response to a child's report was to ignore it (45.0%), and the next most common was simply to acknowledge it without taking further action (32.1%). Because of the small number of events involved and the large number of values for each variable, I did not cross-tabulate the response category with the category of person who was reported on. Instead, I cross-tabulated the response

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category with the negativity of the report (as shown in Table 14 below), in order to determine whether negative reports were less likely to be ignored.

Table 14. Cross-tabulation of Report Valence with Audience Response

Proportion of responses made to reports of each valence	Report valence (negativity)			
	Negative	Neutral	Positive	<i>Overall</i>
Supported	.05	0	0	.02
Acknowledged	.33	.29	.44	.32
Excused	.02	0	0	.01
Ignored	.41	.52	.22	.45
Reprimanded	.07	0	0	.03
Questioned	.07	.10	.11	.09
Opposed	.05	.09	.22	.08
<i>N</i>	42	58	9	109

There was little difference in the types of responses made to negative, neutral or positive reports, $\chi^2 = 15.0, p = .24$.

6.1.3 Discussion

Considering all reports about third parties in the Wells transcripts, children made considerably fewer negative remarks than I had expected: just 37% of all reports, compared to 93% of all reports in my own observational study (see Section 3.3.1), and 75% of reports in Ross and den Bak-Lammers's (1998) study of sibling tattling. There are two reasons why the rate of tattling in the Wells sample initially appears to

be low. Firstly, my sample included a lot of descriptive reports, whether negative, such as “Daddy’s [a] silly old daddy,” or non-negative, such as “He likes trains.” When descriptive comments were excluded, so that only reports of people’s actions were considered, negative reports were more numerous than neutral reports, accounting for 46% of the sample. Secondly, reports about peers’ or siblings’ behaviour were much more likely to be negative than reports about parents’ or other adults’ behaviour. When considering only non-descriptive reports about peers’ or siblings’ actions, 61% were negative, which is closer to the figure obtained by Ross and den Bak-Lammers (1998), also in a home setting. The remaining difference from the figure found in my own observational study is likely to be accounted for partially by a higher incidence of tattling in the classroom setting, and partially by an over-representation of tattling in my event samples, due to its greater audibility in the noisy classroom.

Data on the content of tattling from this sample needs to be treated with caution, since only 39 non-descriptive, negative reports were recorded. However, more reports of social conventional violations, and fewer instances of physical aggression, were recorded than I had expected, based the results of my own observational research reported in Section 3.3.2. It is unclear whether this reflects a genuine cultural/historical difference, or is only a statistical artefact. Property disputes were again well represented, as in my observational study and Ross and den Bak-Lammers’s (1998) study, emphasizing the point that feelings of property entitlement are a common cause of disputes in preschool-age children (Killen & Turiel, 1991).

Like the proportion of negative reports, the proportion of egocentric reports was much lower in the Wells sample than in my sample from the two preschool classrooms: 37% compared to 77%, even when descriptive reports were excluded.

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This figure actually fell slightly when only reports of sibling or peer behaviour were considered. However, when incidences of pure tattling, defined as the reporting of negative actions, were considered, 53% were found to be egocentric (that is, they described transgressions of which the tattler was the victim). The remaining discrepancy is likely to be accounted for by the high incidence of reports of social conventional violations, which typically have no victim.

One of the most troubling findings—from the point of view of the thesis that tattling is important for achieving the punishment of norm violators, and hence encouraging cooperation—is that audiences (almost always parents) in the Wells transcripts hardly ever responded very positively to children's reports of negative behaviour. They supported tattlers in only 2 out of 39 cases, and frequently ignored them (in around 40% of cases). A small part of this discrepancy is due to the reporting of behaviour that did not take place in the immediate context—such as recounting to the parent something that happened at school, which clearly the parent could do little about—whereas tattling in the preschools in which I studied usually referred to something that had just happened in the immediate social environment. However, this only accounted for a handful of cases. A more important factor may be a cultural change for parents to be more responsive to tattling (cf. Hewitt, n.d., for a similar change on the part of teachers), since Wells's (1981) data was recorded in the 1970s, whereas Ross and den Bak-Lammers's (1998) was recorded in the 1990s. In any case, it is interesting that children in the Wells sample were still tattling quite frequently, even though they were not often getting much of a response from their adult audience. Tattling—sharing information about negative actions on the part of others—may thus reflect quite a deep-seated drive or innate predisposition in children's behaviour, irrespective of its social consequences.

This analysis of the Wells transcripts indicates that children's reports of others' behaviour may be more sensitive to cultural context and methodological parameters than I had surmised, based on the many similarities I found between the observational results reported in Chapter 3 and the findings of Ross and den Bak-Lammers (1998) on tattling between siblings. Nevertheless, the results for negative bias and egocentrism were fairly similar, once the analysis was restricted to reports of actions performed by siblings or peers. It is also notable that positive reports, along with reports of actions performed on the audience or on a third party, were very rare in all samples that I have looked at. Perhaps the most interesting finding is that children's reporting of other children's—whether peers' or siblings'—actions was much more likely to be negative than either their reporting of adult actions, or their descriptions of other children. This suggests that negative bias is not a general feature of children's social communication, but is limited to competitive relationships and to actions rather than traits. Children clearly use different verbal routines, motivated by different strategic aims, in describing siblings' behaviour than in describing parents' behaviour. Perhaps the routines used with siblings and parents in the home environment are used as templates for the routines used with peers and teachers, respectively, in the preschool environment. Similar parameters may constrain negative gossip among adults, as with the competitive situation studied by Kniffin and Wilson (2005).

6.2 Use of Ethnographic Material from eHRAF

Although my attempt to use a conversation transcript database to make cross-cultural comparisons was hampered by the fact that the transcripts from different cultures are usually in foreign languages, another option was to make use of ethnographic

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databases, since ethnographic materials are often translated by an anthropologist and stored in English. For much of the 20th century, there was a strong methodological bias in cultural anthropology towards data collection in the field: recording in holistic detail as many features of a population's lives as possible, without too much regard for even broad-brush comparisons between peoples and cultures, let alone for testing hypotheses (Sarana, 1996). The resulting set of ethnographies has proved an invaluable record of ways of life which, in many cases, have since been lost almost entirely to the process of modernization—proving strong justification for this methodological focus. Processes of modernization and cultural assimilation continue unabated, so this ethnographic work must continue as well; but as the number of individual cultures (especially unstudied cultures) shrinks and the number of ethnographers grows, anthropologists are expected to turn their attention increasingly toward the analysis of already-collected data, and the use of this data to form theoretical models and test hypotheses.

To do this effectively requires a standardized way of storing ethnographic data in some kind of central repository—what is known as an ethnographic database. Probably the best known ethnographic database is eHRAF World Cultures, which is produced by Human Relations Area Files, Inc., a non-profit consortium of colleges and universities based at Yale University.⁴⁴ The eHRAF database is essentially a web-based interface to the Human Relations Area Files (HRAF), which was set up in 1950 as a constantly growing archive of ethnographic texts and has gone through a gradual series of structural changes since then (Roe, 2007). In the words of the eHRAF website:

⁴⁴ See <http://www.yale.edu/hraf/> and <http://ehrafworldcultures.yale.edu> (both retrieved May 4, 2009), but note that the latter address requires password authentication.

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eHRAF World Cultures is a cross-cultural database that contains information on all aspects of cultural and social life. The annually-growing eHRAF database is unique in that the information is organized into cultures and ethnic groups and the full-text sources are subject-indexed at the paragraph level.

(<http://www.yale.edu/hraf/collections.htm>, retrieved May 10, 2009)

The subject-indexing of eHRAF World Cultures means that each paragraph in every ethnographic report in the database is tagged with one or more subject codes—or *OCM* (Outline of Cultural Materials) codes, as they are known—out of a list of hundreds. Thus, it is possible to formulate hypotheses about the presence, frequency or co-occurrence of various social behaviours in different cultural groups, and test these hypotheses using structured searches of the database. The HRAF collection has been used for investigating the cultural distribution of behaviours as diverse as breastfeeding (Niehoff & Meister, 1972), feuding (Otterbein & Otterbein, 1965), polygyny (Ember, Ember, & Low, 2007), spanking (Straus, 1996), and sexuality in old age (Winn & Newton, 1982).

6.2.1 *Aims*

There were three main aims of this part of the research:

1. To search for examples of tattling—or analogous reporting of behaviour by children—in the anthropological literature.
2. To demonstrate that the use of gossip to deter norm violations is a human universal, and not limited to the mainly European and indigenous North American societies referred to in Section 2.1.4 of the literature review.
3. To investigate whether a norm against negative gossip is present in different cultural contexts.

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6.2.2 *Method*

For each of the research aims mentioned above, a single structured search was conducted. All matching paragraphs from the eHRAF database were collated, except for the second search, which resulted in a huge number of hits. For this search, results were limited to the 60 cultures in the Probability Sample File (a stratified random sample of cultures across the whole world which met certain ethnographic criteria).⁴⁵ For each search, the collated result paragraphs were coded according to certain qualitative themes, after checking that each paragraph represented a genuine match for the search term.

6.2.3 *Results*

Children's Reporting of Behaviour

Initially I ran a plain text search for the words *tattling* and *tattle*, since these words do not correspond to any OCM subject codes in the eHRAF system. In four cultures (the Lur, Blackfoot, Iroquois, and Yahgan) the word *tattling* had been used by the ethnographer about the conversation of adults, as a synonym for idle gossip. Among the Dogon of Mali, for example, cobblers were looked down on as “liars” and “tattle-tales” (de Ganay, 1941/2000, p. 65, n. 1). There were three examples of the use of the word *tattling* about children's behaviour. In an ethnography of North American Hasidic Jews (I. Rubin, 1972), tattling was listed alongside quarrels and mild physical aggression as an example of a behaviour associated with the strong sibling rivalry in that community. In an interesting analysis of Israeli children's secret-sharing behaviour, Katriel (1991, p. 188) mentioned that a child-marked

⁴⁵ See <http://ehrafworldcultures.yale.edu/ehrafe/miscell/psf.pdf>, retrieved May 13, 2009; also Naroll (1967).

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expression meaning *to tell small secrets* was constructed in analogy to similar words meaning *to gossip* and *to tattle on*. Zavella (1987) quoted a Chicano (Mexican) woman from the Santa Clara Valley of California, who described how her children would “tattle” on their father (“Mommy he did this ...”) after he looked after them while she worked nights. Apache men would formerly employ female relatives to report on their wives’ fidelity while away on raiding parties, but “[their own] children could not be expected to tattle on their mother” (G. Goodwin, 1942, p. 340).

Since the word *tattling* itself had not turned up many results, I then selected 3 out of the 30 OCM codes that were associated with the word *children* in the eHRAF system (OCM 857: *Childhood activities*, OCM 855: *Child care*, and OCM 856: *Development and maturation*), and performed a Boolean *AND* search for each of these with the OCM code for *Dissemination of news and information* (OCM 203), since this seemed the closest code to the concept of reporting others’ behaviour. Only eight paragraphs in total were returned by these searches, and none of them fitted my definition of tattling (the most common topic was the use of children as messengers). Again, though, Tamar Katriel’s (1991) work on Israeli children’s sharing of secrets was highlighted by this search, including the case of a 9-year-old girl who used the words for *telling secrets about* and *gossiping against* as synonyms, complaining to her teacher that other children were telling secrets about her and gossiping against her. Katriel argued that:

Through their preoccupation with other-oriented secrets children chart and rechart their group relations, enhance or undermine their own and each other’s social standing, and reaffirm or shift social alliances. In all of this activity, the content of the secrets exchanged becomes secondary, often even to the child the secret is about or against. It is in the very activity of telling secrets against one another, with the particular structuring of information involved, that children utilize the social form of secret-sharing as a strategic tool in their manipulation of social relationships. (1991, p. 191)

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This use of language to manipulate social relationships has certain resonances with the socially strategic uses of tattling described in Chapter 4 of the present thesis. However, I would argue against Katriel that the content of tattling (and probably of secrets) is actually very important, since it contributes to the audience's probable response: certain norm violations or secret revelations tend to be more or less ignored, whereas others command attention. Katriel's own work can be used to support this position: she also noted the prevalence of secret-sharing games among pre-adolescents—often played alongside “kissing games” and involving embarrassing secrets about a member of the opposite sex that the child was attracted to—through which the players explore the development of their own sexual and romantic feelings. Here the content of the secret seems paramount: preadolescents quickly learn that it is more socially acceptable, in general, to be attracted to some people than others (heterosexual attractions might be more likely to be shared than homosexual ones, for example).

Gossip as Social Deterrent

The word *gossip* is associated with three OCM codes in the eHRAF system: OCM 521 (*Conversation*), OCM 682 (*Offences against life*) and OCM 626 (*Social control*). The third of these seemed the most relevant to the function of gossip as a deterrent against norm violations. I therefore performed a Boolean *AND* search for this OCM code with the plain text search term *gossip*, in order to identify instances where gossip was used as a form of social control. This search returned 443 paragraphs from 233 ethnographic documents about 82 of the 165 cultures in the eHRAF system, indicating that the use of gossip to deter norm violations is a genuine cross-cultural phenomenon. However, there may be regional differences in

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the extent to which gossip is used in this way. Although cultures from 7 out of the 8 regions of the Probability Sample Files (PSF) were represented (the exception being the Kurds, the only culture in the Middle Eastern region) the European region did seem to be particularly well represented (as was the case in Section 2.1.4 of the literature review): the search returned hits for all 3 of the European cultures in the PSF, compared to only 3 out of 16 African cultures.

Nevertheless, some common themes emerged from these materials. People who fail to live up to norms of sharing, gift-giving and reciprocity tend to be common targets of gossip.⁴⁶ Among the Wolof of Senegal, for instance, “village gossip never fails to comment on gifts which are considered too stingy” (Zempleni-Rabain, 1973, p. 227). Koreans were gossiped about if they did not return the gifts of those who visited them while they were ill, when the initial donors were in a similar situation (Chun, 1984). Barnett (1970) described the case of a Taiwanese man who took a cake home from a religious festival one year, and failed to meet his obligation to return it the next year. His behaviour was confronted only indirectly, by the publication of two parallel lists on the temple bulletin board: those who had taken cakes home, and those who had returned them. Similarly, indirect forms of confrontation such as gossip or witchcraft might be used to target a Tzeltal man (in southern Mexico) who failed to give the proper donations to his church (Hunt, 1962). In a North American Plains Indian culture, McFee (1972) noted: “Highest status went to the generous man; a stingy man was the butt of gossip, and lost status among the Blackfeet” (p. 46; see also p. 101). In some cultures, such as the Hopi of the American Southwest, merely possessing above average wealth could lead to

⁴⁶ See also Haviland’s (1977b) topic frequency analysis of gossip in Zinacantán, Mexico, reviewed in Section 2.1.4.

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malicious gossip about how it must have come from an illicit source, such as robbing graves or sacred objects (Cox, 1968; Nagata, 1970).

Another frequent focus for gossip concerns illicit sexual practices.⁴⁷ The specific contents of these that are most popular to gossip about seem to vary to some degree between cultures, from the use of homosexual prostitutes in the Bahia region of north-eastern Brazil (Hutchinson, 1957); to polygyny or incest in Central Thailand (Amyot, 1976; Kemp, 1992), or marriage to a paternal kinswoman among the Hopi (Nagata, 1970); to unmarried motherhood in Korea (Osgood, 1951), unarranged marriages in Taiwan (Gallin, 1966), or taking too many “trial wives” among the Aymara of Bolivia (Buechler & Buechler, 1971); to adultery or premarital sex among the Highland Scots (Ducey, 1956; Parman, 1990), or a wife’s infidelity among the Saami of northern Finland (Pelto, 1962). Adultery is in fact a common theme of gossip, being also noted among the Saramaka maroons of Surinam (S. Price, 1993). Gossip about their own extramarital affairs was actually spread intentionally by certain inhabitants of Truk in Micronesia, in order to break up an unwanted marriage (Gladwin & Sarason, 1953).

As mentioned in Section 2.1.4 of the literature review, societies in which gossip plays a prominent role in social control also tend to be societies in which witchcraft or sorcery beliefs are rife; and witchcraft accusations are themselves a common topic of gossip in those societies (see Stewart & Strathern, 2004). Cultures in the PSF sample in which the ethnographer had explicitly associated gossip with witchcraft or sorcery beliefs include the Highland Scots (Parman, 1990), the Tarahumara of northern Mexico (Fried, 1951; Kennedy, 1978), the Tzeltal (Hunt, 1962), the Hopi

⁴⁷ Again, see Haviland (1977b).

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(Cox, 1968; Eggan, 1943, cited by Clemmer, 1995; Schlegel, 1992), and the Trukese or Chuuk (Caughey, 1977; Mahony, 1969).

These results indicate the wide geographical spread of the use of gossip as a deterrent against norm violations. However, I remained concerned that the cultures I had examined included few examples of foragers outside North America (which was represented in the search results by the Blackfoot and the Ojibwa), raising the possibility that this use of gossip might be associated more with agricultural economies. Finding examples of gossip among foraging cultures is especially important for an evolutionary argument, since foragers or hunter-gatherers have been argued to be closest to the environment of evolutionary adaptedness (Tooby & Cosmides, 2005). Fortunately, the eHRAF system includes a classification of subsistence type, compiled by C. R. Ember.⁴⁸ I therefore ran the search on *gossip* and OCM code 626 (*social control*) once again, this time following up the results for any cultures which were of the *Forager* subsistence type. Examples of the use of gossip for social control were found among the following forager groups: the San of southern Africa; the Manus of Melanesia; and the Warao and Yahgan of South America. Paragraphs from ethnographies about these cultures were opened at random to check that there was a genuine association between the search terms in these results.

Norms against Gossip

I had hoped to use one of the other OCM codes associated with gossip, OCM 682 (*Offences against life*) to investigate the cultural distribution of norms against gossip, since one of the examples of behaviour listed for this code is the use of

⁴⁸ See <http://ehrafworldcultures.yale.edu/ehrafe/miscell/subsistence.pdf>, retrieved May 4, 2009.

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gossip as verbal aggression. However, this code is dominated by instances of homicide and other forms of serious violence, and most of the search results turned out to be instances of gossip about such violence. I was nevertheless able to find instances of norms against gossip in the previous search results, for *gossip* and *social control*, since these included several examples of attempts by societies to limit the damage caused by gossip.

For instance, the Ashanti, an Akan people of Ghana, had several words for gossip, which they “consider[ed] one of the most mischievous and dangerous of offences” (Rattray, 1929, p. 327). “Tale-bearing” was punished extravagantly, by smearing the tale-bearer’s face with charcoal, placing a live fowl between his teeth, and forcing him to parade through the streets, beating a gong (ibid.). Restrictions against gossip were used to reinforce power (see p. 14 of the literature review): according to Rattray, tale-bearing concerning the affairs of a chief was punished by cutting off the lips; and a young child might be beaten for revealing the everyday deceits of a father to his friends. Restrictions against negative gossip were not unusual in western Africa: it was also frowned upon among the Dogon of Mali:

People do gossip, but they are very careful in their actual wording as well as in their audience. ... The ideal is to have a “white belly and a white liver”, that is, to have just and unshameful thoughts and be free with their expression. (van Beek, 1994, p. 209)

According to Wiessner (1977, p. 151), it was common for the San of southern Africa to criticize people to their face, but rare for them to gossip behind their backs. Even among the Highland Scots, where gossip is rife, “there are rules for gossiping,” and “there is such a thing as too much gossip” (Parman, 1990, p. 104). But in some Middle American cultures, as in some African cultures, any form of negative gossip was officially prohibited: the Kuna of Panama, for example, treated it “as a threat to

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social order as well as an offense” (Howe, 1986, p. 222). In ceremonies to mark the beginning of Tarahumara fiestas, participants were exhorted by preachers not to fight or “speak badly” of others (a proscription which the ethnographers believed to be directed at sorcery as well as insults, threats and malicious gossip; Fried, 1951, pp. 160–161; Kennedy, 1978, p. 202).

6.2.4 *Discussion*

In the eHRAF database I could find only a few rather oblique references to children’s tattling. Perhaps this is symptomatic of a general neglect of children’s worlds by adult ethnographers (see Hirschfeld, 2002). Whatever the reason for the absence of tattling in the ethnographic literature, it is clear that it would be extremely valuable to attempt an ethnographic study of tattling in a non-Euro-American culture, in order to ascertain whether the practice is unique to this cultural group or a more universal feature of children’s discourse. In cultures where adults are less directly involved in childrearing, one possibility might be that young children would tattle to older children instead of to their parents or teachers, and this would be an interesting prediction to test.

Turning to the data on adult gossip, the use of gossip as a form of punishment for norm violations is widespread. In fact, for many of the cultures in the PSF sample gossip was the primary means of social control—in the absence of formal systems of law and punishment—and was identified as such in the eHRAF culture summary for that culture. Interestingly, gossip did not often seem to lead to violent punishment in many cultures: indeed, in Asian and Pacific cultures covert gossip seemed to be used wherever possible in a deliberate attempt to *avoid* direct confrontation. Gossip did sometimes lead to ostracism, but most cultures seemed to rely on people’s sense of

shame at the idea of being gossiped about. Among the Blackfoot of Montana, for example:

The delinquent person was cautioned, ridiculed, gossiped about, and shamed into conformity. Ostracism and violence were the ultimate penalties within the band, but usually gossip and shame served to restore order. (McFee, 1972, p. 43)

The cross-cultural relationship between gossip and shame suggests that there may be some kind of innate, aversive affective response—at least in some individuals—to the idea of a fall in one's reputation, which is clearly relevant to any evolutionary argument about the importance of gossip for cooperation.

Although widespread, the use of gossip for social control appears to be more prevalent in certain regions and cultures than others. Discussion of gossip is under-represented in African ethnographies, but a frequent theme of European and native North American studies. The apogee of gossip is reached among the Hopi, for whom there were 36 references to gossip as social control, in 12 documents; and the Highland Scots, for whom there were 25 references, in 5 documents.⁴⁹ To some extent, this may simply be a function of local ethnographic traditions and the random statistical distribution of individual ethnographers' interests. However, it may also be the case that gossip is tolerated more in some cultures than others, and that the degree of tolerance extended to it affects the degree to which it can be used as punishment. It is noteworthy that African cultures, which did not seem to be characterized by the use of gossip to punish norm violations, also stand out for the stringency of their norms *against* gossip. Elsewhere (e.g., among the Highland Scots;

⁴⁹ The Navajo, near neighbours of the Hopi, reached 27 references to gossip as social control, in 13 documents; while the Greeks reached 24 references, in 12 documents; but neither culture is included in the Probability Sample Files. Gossip as a means of social control was also well represented among the Tongans of Polynesia, with 22 references in 7 documents.

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Parman, 1990) there seemed to be more of a norm against gossiping *too much*—as if against over-indulging in a kind of natural tendency (as with gluttony, for example). It is true that in Scotland, as in many other places, gossip tends to be mildly denigrated—especially by men—and looked upon as a womanly activity (ibid.). But it could be argued that negative gossiping—like children’s tattling in the earlier part of the 20th century—would not have to be either prohibited or denigrated in any society if there were not a natural tendency to do it.

Given the apparent cultural variation in the importance of gossip for social control, it would be interesting to try to find out what, if anything, those cultures marked by high rates of gossip have in common. It is of course possible that the high frequencies of ethnographic reporting of gossip in some or all of these cultures are due to one or two early ethnographers spending a lot of time on the topic, and their interests being followed up by succeeding ethnographers. However, in this context it is worth noting that Gluckman, who inspired a huge amount of anthropological interest in gossip and argued that it can be an important means of social control, was primarily an Africanist. An alternative hypothesis is that rates of gossip, and its importance in supporting norms of cooperation, would vary according to bio-ecological factors. One speculative idea is that gossip might be more important in groups with a fission/fusion type of social structure, in order to spread information about people who have not been seen for a while. However, rather than the reporting of norm violators, another key benefit of gossip (spreading neutral information about distant kin and allies; see p. 8) might be of central importance in such cases. Perhaps the cheater-detection function of gossip becomes more important in societies at a certain level of economic and political integration—such as previously separate tribal groups that are merging into a nation—reflecting the increased risk of

exploitation by previously unknown contacts.⁵⁰ Gossip may also be important in societies with strong traditions of pastoralism, such as the Greeks and Scots, for which individual reputations within an “honour culture” are paramount (Nisbett & Cohen, 1996, cited by Richerson & Boyd, 2005; cf. Boehm, 1987; Ellickson, 1991).

6.3 General Discussion

The two corpora analyzed in this chapter are very different, yet there is an important point of contact between these two parts of my research. In the first part of this chapter, I looked for instances of children’s reporting of behaviour in a particular corpus in the CHILDES database, containing transcripts of young children’s conversations in 1970s England. I found both similarities and differences with the results of my own observational research on tattling. One important difference lay in adults’ responses to tattling: parents in the Wells (1981) transcripts were far less likely to support tattling than either teachers in my study, or parents in the Canadian study of Ross and den Bak-Lammers (1998). The second part of the chapter, in which I analyzed ethnographic data in the eHRAF database, was much less illuminating about children’s reporting of behaviour. However, it did highlight some clear cross-cultural differences in adults’ reporting of behaviour via gossip. Some cultures were more likely than others to enforce norms against gossip, and this may have affected the extent to which gossip could serve as a deterrent to norm violations in those cultures.⁵¹ Perhaps adults’ responses to tattling—as in the case of the Ashanti boy who was beaten for revealing his father’s deception (Rattray, 1929)—

⁵⁰ A similar pattern seems to hold for witchcraft accusations (Stewart & Strathern, 2004).

⁵¹ It seems that norms against gossip can be co-opted by powerful groups in a society, as in the case of the Ashanti, which might limit the equalizing tendencies of gossip proposed by Boehm (1999).

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may serve to guide children in their developing attitudes towards gossip. It is interesting to speculate on whether more permissive—even supportive—attitudes to tattling in Euro-American societies over the last 30 years (e.g., Hewitt, n.d.) might be reflected in changing adult attitudes to gossip, and an increased use of gossip to discuss—and perhaps even deter, in certain situations—the breaching of certain social norms.

Another interesting point of contact between gossip and tattling is the prevalence of norms of sharing and reciprocity as topics for adult gossip in many cultures, just as they are common topics of children's tattling (see, e.g., the discussion in Section 3.4.2). Other topics of gossip, such as sexual taboos, are of course not represented in tattling. This illustrates a point often made by evolutionary developmental psychologists, namely that some adaptive preoccupations and social dynamics are common to both children and adults, whilst others differ (Bjorklund & Pellegrini, 2000, 2002). In the Conclusion I will try to sketch out some of the transformations that might take place in the behavioural reporting of peers' activities, as humans develop from tattling children into gossiping adults.

7. CONCLUSION

Linguistic acts are social acts that one person intentionally directs to another (and highlights that he is doing this) in order to direct her attention and imagination in particular ways so that she will do, know, or feel what he wants her to. These acts work only if the participants are both equipped with a psychological infrastructure of skills and motivations of shared intentionality evolved for facilitating interactions with others in collaborative activities. Language, or better linguistic communication, is thus not any kind of object, formal or otherwise; rather it is a form of social action constituted by social conventions for achieving social ends, premised on at least some shared understandings and shared purposes among users. (Tomasello, 2008, p. 343)

I began this thesis, in the literature review, with the suggestion that language may have contributed to the evolution of large-scale systems of cooperation in humans, via the spread of information about norm violations. Information spread in this way has typically been glossed as *gossip*, and hence I considered a range of psychological and anthropological approaches to gossip, emphasising that gossip appears to be a cultural universal and that it has been conceptualized in diverging, but related, ways by various theorists. I stressed the potential contribution of a developmental perspective to evolutionary psychology, and in this context, noted the paucity of research on the early development of gossip in children. One interesting, but particularly neglected area is *tattling*, which I defined in broad terms, as children's reporting of a peer's negative behaviour. I reviewed what little existing work there is on tattling, the most useful of which focused on tattling between siblings in the home (den Bak & Ross, 1996; Ross & den Bak-Lammers, 1998). I also identified parts of the psychological infrastructure required for tattling to develop in children—emphasizing that it is a complex social behaviour that appears to involve the

integration of several psychological competences, including theory of mind, moral reasoning, and social cognition.

My most important contribution to the literature on tattling (reported in Chapter 3, and by Ingram & Bering, in press) was an exploratory observational study of tattling in two preschool classrooms, a context in which it had not been systematically studied before. The bias I found towards the reporting of negative behaviour—particularly property disputes and physical aggression—on the part of peers, in such young children, seemed to support the idea that the spreading of information about norm violators might have been a primitive feature of language. If it didn't contribute to the adaptive value of language, a bias towards reporting negative behaviour may at least have had beneficial side effects in terms of its potential for supporting systems of cooperation. Other biases found include a tendency to report actions which had happened to the child doing the reporting, and to report nearly all actions truthfully, reinforcing the sense that this sort of behaviour might be adaptive both to the individual (by ensuring that her problems do not go unnoticed by those who care for her) and to the group as a whole (by ensuring the efficient spread of accurate social information). Furthermore, reported transgressions were often punished by adults, meaning that the behaviour had clear reputational consequences. The links that I found between tattling and dominance, on the one hand, and tattling and relational aggression, on the other, also suggest that reputational competition develops quite early in children, and that peer conflicts are quickly displaced from physical aggression into an indirect, verbal (and rather public) arena.

In Chapter 4 I looked in more detail at the complex social context of tattling, and the range of motivations that lay behind it, as revealed by protracted periods of

participant observation in the same two preschools. Commonly found behaviours such as counter-tattling and threats of tattling demonstrated that tattling did not occur in a social vacuum, but was a strategic activity played out against a shifting background of social conflicts and alliances. Children often seemed to have quite selfish motives, either to gain revenge against a transgressor or to resolve an ongoing conflict; but on occasions they seemed more disinterested, concerned with upholding social norms that they clearly felt were important. The responses of adults to tattling also varied according to context—especially in terms of how busy they were—but they nearly always responded to reports of serious incidents such as physical aggression.

In order to investigate what might be causing the bias towards reporting negative behaviour, I piloted some simple experiments in schools, reported in Chapter 5. Reasoning that young children might pay more attention to negative social behaviour, and hence remember it better, I tested their recall of stories involving asocial, prosocial and antisocial actions. Although stories containing social actions were recalled better than stories containing asocial actions, the stories that contained antisocial actions were not recalled any better than the stories that contained prosocial actions. In addition, children's recall (and perhaps, by proxy, their attention) seemed to be very sensitive to context, with unpredicted differences found between certain stories of the same behavioural valence, and an unpredicted gender interaction in Study 2. Further, more strictly controlled experimental studies are planned in order to rule out the possibility that biases in reporting are caused by biases in memory or attention.

Any study that invokes evolutionary explanations of behaviour needs to incorporate a cross-cultural component, to avoid being biased towards the

researcher's own culture. Since my research already included observational and experimental components, the cross-cultural element in this thesis was necessarily small and exploratory, but it did point the way to future studies. There was a limited amount of cultural variation between the preschools where I conducted observational research, linked to a more culturally diverse intake in one of the schools. This seemed to result in differences in the gender patterns of tattling between the two schools. I also undertook an analysis of transcripts of young children's everyday speech within the home recorded as part of the Bristol Study of Language Development (Wells, 1981) and freely available as part of the CHILDES database (MacWhinney, 2000). Although the negative bias in reports of behaviour was less striking than in my own observational study, it was still present, but only when reports about peer and sibling behaviour were considered, and only in reports of actions rather than descriptions of traits. Finally, an analysis of ethnographic materials in the eHRAF database showed that gossip is used to punish norm violations in many cultures, but that some cultures place restrictions on gossip; and also that there is little ethnographic information on children's reporting of behaviour.

Drawing together the threads of this research, the finding that children are more likely to report the negative behaviour of peers offers superficial support to the idea that language is important for enforcing systems of cooperation. However, even in young children this kind of behavioural reporting is already a complex, strategic activity with a variety of motivations: it is not likely to arise from a simple attentional bias towards events that generate negative affect. Furthermore, the reporting of negative behaviour may be an activity that is particularly associated with competitive relationships, such as exist with siblings and other peers, rather than with dependent relationships, such as exist between children and caregivers.

The implication is that children may indeed be biased towards reporting the negative actions of others, but only in certain contexts. Tattling is not merely an artefact of the rule-bound environment of the preschool classroom, however: Ross and den Bak-Lammers (1998) found that tattling between siblings in the home had very similar properties, as discussed in Chapter 3.

In the next two sections, I explore some of the implications of this thesis for the origins of cultural norms in humans and for the development of social communication in children, before concluding the thesis by outlining some further directions in which this work might be taken.

7.1 Tattling and the Acquisition of Social Norms

In the course of writing this thesis, my own thinking has evolved quite considerably. I began with the ideas that gossip (broadly defined) was a key driver of the evolution of cooperative behaviour in humans, and that children's tattling might represent a developmental precursor for this aspect of gossip. After analyzing the results presented in Chapter 3, I modified these ideas. I came to the preliminary conclusion that there were ontogenetically adaptive biases in children's language, which may have led to the evolution of cooperation as a by-product, rather than the supporting of cooperative behaviour being part of the original adaptive value of language. I still think there are elements of truth in this picture of tattling. But the rest of the research that I have carried out has raised certain problems for this view. In this section I briefly discuss some of these problems, and attempt to use other findings from my research to resolve them within a broadly interactionist framework (see, e.g., Nelson, 2007). I will be viewing tattling and gossip as examples of different stages in a developmental system that is distributed across individuals within a social group.

1. The first problem arose within the behavioural ecological study itself, and concerns the reporting of non-egocentric, social conventional violations. In Section 3.4.4, I argued that children are biased towards reporting egocentric transgressions of which they themselves are the victim. This leaves unanswered the questions of how and why they extend this reporting behaviour to transgressions that have no particular victim.
2. In Chapter 4, much space was devoted to showing that tattling can have many motivations, and that children practise it strategically within a detailed social context. It may be unconvincing, in light of these facts, to give a single evolutionary account of tattling as a monolithic entity.
3. Experimental Study 2, reported in Chapter 5, tentatively indicated that the negative bias in peer reporting may not simply be a matter of children paying more attention to norm violations. An obvious alternative hypothesis is that children report norm violations strategically, as part of a conscious process of reputational competition. But this strategic hypothesis seems to presuppose a sophisticated awareness of social norms of cooperation on the part of children, the evolution of which is the very thing I was trying to use behavioural reporting to explain.
4. My analysis of the Wells transcripts showed that parents were often rather unresponsive to their children's tattling—the most common response was for them to acknowledge what their child had said and then move on to another topic of conversation. This seems to undermine any simple evolutionary interpretation of tattling as a way of mediating third-party punishment (see Section 2.1.1).

5. Similarly, the general impression left by ethnographic data from the eHRAF database was that in small-scale societies, gossip does not often lead to direct punishment of norm violators. Rather, in many societies its effectiveness in enforcing cooperation seems to rely on its ability to induce shame in those who are gossiped about.

The first three problems are concerned with children's motives for tattling, and with their awareness of social norms. Investigating the relationships between language and social norms can be a frustratingly slippery business. It is likely that complex language, as spoken by modern human adults, co-evolved with social norms, because the use of language is itself governed by detailed syntactic and pragmatic rules. On the other hand, as I suggested at the end of Chapter 3 (see also Ingram et al., 2009; and cf. Tomasello, 2008), a form of proto-language—based around shared attention and proto-imperative directives—may have preceded the evolution of complex social norms, just as it continues to precede the development of sophisticated normative awareness in children. On the other hand, children seem to be pre-adapted to acquire arbitrary social norms from an early age (Harris & Núñez, 1996; Rakoczy et al., 2008). The notion of a generic adaptation towards acquiring social norms may help to resolve the first three problems listed above. It leads to the consideration that there may be two prototypical kinds of tattling, distinguished mainly by motivation and the presence or absence of a victim. *Self-oriented* tattling tends to be egocentric, concerned with moral violations such as physical harm, and motivated by a desire for retribution for another child's (perceived) victimizing behaviour. *Group-oriented* tattling, on the other hand, tends to be motivated by a generalized adaptive concern with upholding abstract social norms that have no single victim.

This distinction mirrors the distinction between self-serving and group-serving gossip made by D. S. Wilson and colleagues (2000), which itself reflected the terms of the Gluckman-Paine debate in 1960s cultural anthropology (reviewed in Section 2.1.4). Another parallel occurs with Nichols's (2004) postulation that both an affective response and a normative theory are required in children's moral development (see Section 2.3.2). Reporting that is motivated by affective response tends to be egocentric, as children are more likely to have strong feelings about behaviour that affects them directly. Reporting motivated by the normative theory component of morality may be more disinterested and strategic, representing a kind of normative *play* aimed both at obtaining positive feedback from an adult, and at competing with other children. In part, this competitive play is driven by the relationship of friendly competition that young children have with their peers, which is perhaps patterned on the sibling relationship and leads to differences in their reporting of children's as opposed to adults' behaviour. The terms of the competition ultimately benefit the group, however, since those children who engage in such normative play are competing to show how assiduously they can uphold the group's rules (cf. Fehr & Fischbacher, 2004a; Milinski, Semmann, & Krambeck, 2002; O'Gorman, Henrich, & van Vugt, 2009).

It seems that affective response and normative theory must become bound together somehow in children's moral development, so that for example they come to see harm-based transgressions as more serious than purely conventional violations. Nichols (2004) did not elaborate exactly how these two components become bound together. My research may provide some clues to this process, by encouraging the consideration of adult responses to children's reporting of norm violations. Tattling is not always about the reporting of information which an adult

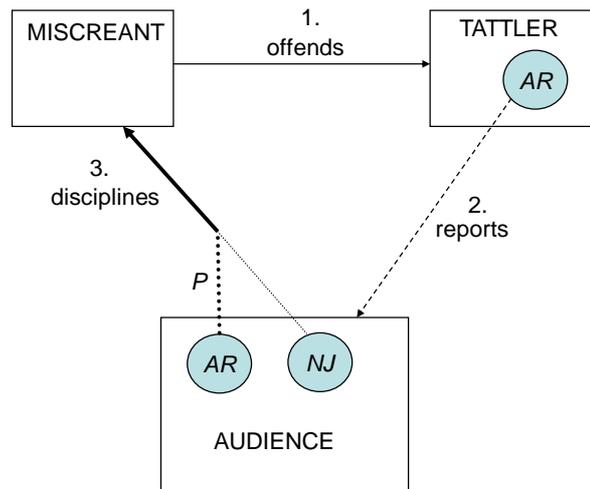
does not know about: it sometimes represents a demand for moral action on the part of a child, which is difficult for an adult to ignore completely if they are at all concerned with providing moral guidance. As a participant observer, I gradually adopted a strategy of acknowledgement and distraction for reports of mild infractions, but support and intervention for more serious offences (see p. 131). This dual strategy also seemed to be followed by the regular staff at the two preschools where I worked, and it is reflected in literature aimed at helping preschool teachers deal with tattling (Hammerseng, 1995; Hewitt, n.d.; SAMHSA, 2004).

The important point for children's moral development is that this distinction between mild and serious transgressions cross-cuts the distinction between those transgressions that trigger a child's affective response and those that do not. Some conventional violations could be treated as quite serious, for instance climbing on top of furniture; whereas property disputes or accidental knocks could often lead to a child becoming deeply upset, but rarely seemed as serious to adults. From an interactionist point of view, the adults' responses provide regulatory feedback to the dynamics of the child's developing moral system, scaffolding the child's learning about what other people find important and what they find trivial.

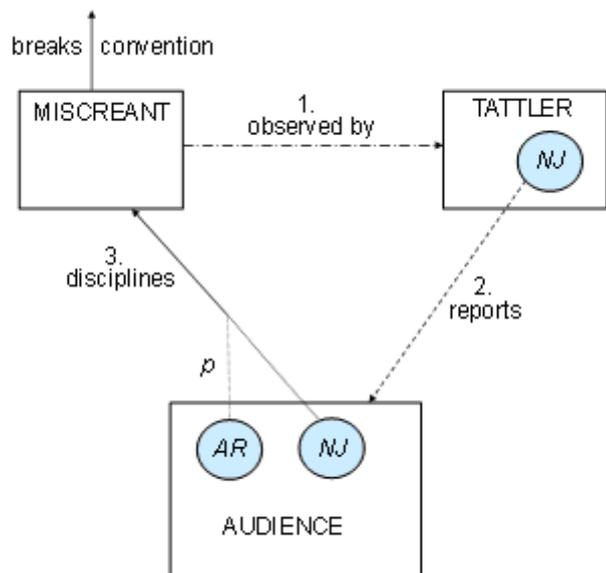
At first, lacking a complex theory of mind, very young children's egocentrism may lead them to assume that their audience will automatically share their negative evaluation of a third party's behaviour (see p. 48). This assumption of a shared negative response to certain actions may be one of the foundations of morality. But by bringing their negative responses to specific actions into the public sphere—through verbal behaviours such as tattling—and observing adult responses to their reports, children's understanding of the shared assumptions underpinning morality becomes progressively refined (see Figure 6 below).

Figure 6. The role of behavioural reporting in producing, in an adult audience, a combination of affective response (AR) and normative judgement (NJ) about a transgression.

a) A moral transgression, resulting in a strong affective response from the tattler, and a higher probability P of the audience's own affective response contributing to a more serious punishment of the miscreant (cf. Nucci & Turiel, 1978).



b) A conventional transgression, resulting in a normative judgement from the tattler, and a lower probability p of the audience's affective response contributing to the miscreant's punishment.



There are two main points to take from the diagram above: (a) the audience's reaction to a report of a norm violation is determined by a combination of normative theory and affective response, with the strength of the affective response being influenced both by the severity of the transgression and the strength of the victim's affective response; (b) the children who were involved in the norm violation (along with others who are watching this process) learn to combine normative judgements with affective responses in particular ways, as the audience reacts with feeling to some transgressions and more dispassionately to others.

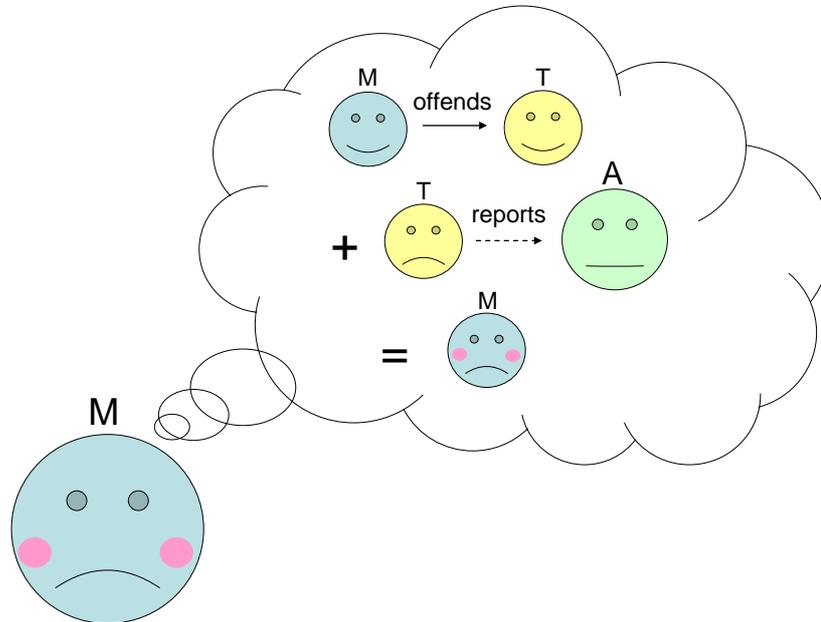
Observing two intertwined aspects of adults' responses to norm violations—the emotional, and the verbally reasoned—serves to fuse the affective and normative-theory components of the child's moral system (and also, perhaps, to improve their theory-of-mind and perspective-taking skills; see Ingram et al., 2009). For some children, extending tattling to actions for which they themselves do not have a negative affective response—the cases of “normative play” discussed on p. 227 above—may play an important role in triggering and promoting this process. However, there likely other routes to moral learning, such as moral discussions with adults (e.g., Buzzelli, 1997; Dunn, 1988, 2006; Wright & Bartsch, 2008), or co-narrations of past experiences (P. J. Miller & Sperry, 1988; P. J. Miller et al., 2005). In many such studies of moral learning processes, however, the emphasis is on dyadic processes: the instruction of a child by a knowledgeable learning. The contribution of the present thesis is to remind us that learning may also take place—and may indeed make more of an impact—through *triadic* interactions: the mediation of peer interactions by adults (or by other, more knowledgeable peers).

There is a third component of this developmental system, in addition to the behaviour of the tattler and the audience—namely, the affective response of the child

whose actions are reported. When adults did intervene in cases of tattling, it was usually either to promote reconciliation, or to *shame* children—via either a rebuke, or (in more serious cases) a mild form of ostracism, such as making them stand against the wall. Importantly, children often seemed ashamed as soon as their behaviour was reported—hence the motivation for counter-tattling—or as soon as they realised they had done wrong: punishment via rebukes and ostracism may have been more about drawing the attention of their peers to the transgression, and hence intensifying the child’s shame. Hence there is another sense in which this kind of interaction can be triadic: I found that most emotionally marked interactions between adults and children were watched closely by many children in the preschool, even if they had not been directly involved in the behaviour that led to the adult’s intervention. And as children’s language grows more sophisticated, they become capable of discussing such interactions more widely. This is reminiscent of the point made by Dunbar (2004b), and elaborated in Section 2.1.1: that language greatly increases the observability of both transgression and punishment.

The emotion of shame can help to resolve the final two problems listed above, if it is accepted that shame is a specific adaptive response to a fall in an individual’s status or reputation—a negative experience designed to deter an individual from carrying out a similar norm violation in future (see Fessler & Haley, 2003; Gilbert, 2003). From a developmental perspective, it is a reasonable speculation that the deep emotion of shame felt by many people when they imagine being gossiped about might be partly caused by the recollection of having their negative behaviour reported to authority figures when they were children (see Figure 7 below).

Figure 7. The role of shame in creating an aversive remembered association between norm violations and verbal reporting (*M* represents the miscreant, *T* the tattler, and *A* the audience).



In the diagram above, the emotion of shame was originally generated by a direct transgression against a victim; but the same process might lead to shame being generated by any social conventional violation reported to an audience, especially if the audience then displayed a negative affective response. Thus it might come to be associated with norm violations in general. Due to the importance of shame for the use of both tattling and gossip to promote cooperation, a further theoretical speculation is that the emotion of shame co-evolved with both language and norms of cooperation. Of course, direct observation of norm violations by adults can also cause shame in children, but the third-party verbal reporting of transgressions would have greatly expanded the scope of this process.

Another important element in this developmental system is the role of third-party adults in mediating reconciliation or conflict resolution, and thus strengthening group cohesion (cf. de Waal, 2000). While playing this very role as a participant observer, I often found myself appealing to basic normative principles, such as equal sharing or taking turns. The part that adults play in either constructing or referencing social norms in response to a child's demand for a settlement—even when this demand was initially only affectively motivated—seems likely to contribute to the development of children's normative theories and the binding of these theories to an affective response.

The idea of reconciliation through third-party mediation—and indeed, the whole concept of group-serving gossip or tattling; and perhaps even children's sensitivity to social norms—seems to imply that humans have adaptations to promote group cohesion. The current research is unlikely to help answer the question of whether these adaptations evolved through group selection or kin selection (compare D. S. Wilson et al., 2000, with Fitch, 2005), and I remain agnostic on this point. However, the notion that tattling can have either self-centred motivations, akin to retributive justice, or more sociocentric motivations, such as a kind of distributive justice (see p. 144), does help to explain why it is such a common feature of young children's talk about peers' behaviour—which is a key explanandum of this thesis. Tattling can occur when children attempt to use language either aggressively or prosocially with reference to others' behaviour. Thus it can take place in a very wide range of situations. This raises the question of why adult gossip is not so negative, on the whole (Dunbar et al., 1997). I will try to answer this question, again from an interactionist perspective, in the following section.

I hope that this discussion goes some way towards answering the problems raised at the start of this section. More research is clearly needed in order to answer them properly. The key theoretical progression in this thesis has been for me to move away from viewing language as an “object” that needed to be explained (see the quotation from Tomasello, 2008, at the start of this chapter), and towards viewing it as a process by which information is exchanged between elements in a distributed developmental system.

7.2 The Social Development of Peer Reporting

I hope that this thesis illustrates the usefulness of evolutionary hypotheses in opening up new areas of study in developmental psychology, and especially in drawing connections between existing fields of research (Bjorklund & Pellegrini, 2000). The hypothesis that children are biased towards the reporting of negative behaviour by peers in preschool settings led me to investigate what children’s everyday discourse can tell us about their social cognition, moral reasoning and theory of mind. I found that the characteristics of young children’s behavioural reporting varied quite considerably according to both social context and individual temperament: children in the Wells (1981) transcripts made fewer negative reports about parents’ behaviour than about peers’ or siblings’ behaviour, and fewer negative descriptions than negative accounts of behaviour; while tattling in the first preschool in which I studied was strongly correlated with social dominance. Participant observation also showed that children often used tattling quite strategically, for example through counter-tattling or threats of tattling. These two activities demonstrate that some young children may be more conscious of reputations than we sometimes give them credit for. Much of their reputational knowledge may be implicit: Hill and Pillow

(2006) found that kindergarten children (aged 5–6) did not generally understand that an individual would have a lower opinion of a peer after learning about his or her antisocial activity indirectly, via gossip, although they did understand that direct observation of antisocial behaviour would affect the witness's opinion. This implies that children may use language in specific cases to damage another's reputation (via tattling) or even explicitly threaten to do so, and also use language to defend their own reputation (via counter-tattling or making excuses), *before* they become aware of the general potential for language to affect people's opinions. Perhaps, at this early stage, their tattling and excuses are motivated by the anticipation of direct punishment or shame, rather than by abstract thoughts about third parties' mental states.

My research implies that, given the noticeable individual variation in patterns of tattling, teachers should take tattling seriously in terms of analyzing why a particular individual is doing it (or not doing it) in a particular situation. Much of the time, however, it must be admitted that tattling is pretty inconsequential, and more like a form of normative *play*. (Likewise, children have no trouble distinguishing between rough-and-tumble play and genuine physical aggression—Pellegrini, 2007—and as a participant observer I quickly learned that there was little point in trying to stop boys from engaging in the former.) Thus, Hewitt (n.d.) advised teachers to encourage young children to solve their own social problems where possible, but to develop a sense of when a transgression was serious enough that a teacher needed to be told. A similar approach was taken by Hammerseng (1995) and the Substance Abuse and Mental Health Services Administration (2004). Perhaps the trivial connotations of the word *tattling* already reflect this distinction (as in the title of Hammerseng's book, *Telling isn't Tattling*).

No doubt tattling and related forms of children's behavioural reporting vary to a considerable extent between cultural settings, just as adult gossip does. I was not able to discover many references to tattling in the ethnographic literature; but I did find considerable similarities between tattling in the preschools where I studied and in the Canadian family homes where Ross and den Bak-Lammers (1998) carried out their research, as well as similarities between these two populations and the children of 1970s Bristol, England, recorded by Wells (1981) and transcribed in the CHILDES database. However, adults in this last population seemed much less supportive of tattling than in the other two settings. In general terms, children of all cultures might face similar environmental constraints in terms of being relatively powerless individuals in a world where one or more powerful carers are concerned for their welfare and will look after their interests. These similar constraints might account for similar patterns of tattling across cultures.

In all cultures, however, there are likely to be individual variations in peer reporting, representing that there is always a plurality of potentially adaptive social cognitive strategies for children to follow. Based on the correlation I found in Preschool A, my hypothesis is that tattling is an attractive strategy for dominant children but not for submissive children. Adult responses to tattling, on the other hand, are likely to be less variable between individuals from the same cultural background, but more variable between cultures, due to a host of learned beliefs and values. It is quite possible that the divergent responses to tattling received by children in different cultures would influence the same individuals' attitudes to gossip in adulthood, contributing to the development of local norms against negative gossip. Of course, the existence of a local norm against a natural behaviour pattern

does not mean that it is universally or even commonly adhered to (see my discussion of Mrs A's general treatment of tattling on p. 148).

With regard to the development of norms against tattling in Euro-American society, there are two key differences between tattling by young children in preschools and negative gossip by adolescents in secondary education. Firstly, teenagers do not tend to report peers' minor infractions to a teacher: the audience for their gossip overwhelmingly consists of other peers. Secondly, gossip is typically covert (Archer & Coyne, 2005), whereas tattling among the young children I observed was overt and unashamed. These two important changes in the nature of peer reporting are likely to have two different causes. A norm against reporting peers' transgressions to teachers, or other authority figures, is likely to arise out of a combination of the idea of in-group betrayal (as with "snitching" or "grassing" among criminals; see Rosenfeld et al., 2003; Yates, 2006) and the implied signal that an individual is too weak to deal with his or her own social problems (cf. Friman et al., 2004). It might therefore develop during preadolescence, as children become more aware of group boundaries and as reputational competition becomes more salient (Krebs, 2005). A norm against openly reporting misdemeanours, on the other hand, is likely to arise from the developing awareness that such reports are likely to be interpreted as aggressive, and therefore to meet with aggressive reprisals. Perhaps this awareness, which is presumably based on more sophisticated social cognition and theory of mind, develops at about the same time that children become aware of the potential of language to damage reputations, an awareness that Hill and Pillow (2006) found was already possessed by 7–8-year-olds. The dual nature of this developmental transition in peer reporting suggests the hypothesis that a norm against overt gossip might generally develop before the norm about gossiping to an

out-group member. Alternatively, the development of such norms might be purely contingent on local cultural variables.

A final difference between adults' and children's everyday reporting of behaviour is that adults' behavioural reporting is apparently much less likely to be negative (Dunbar et al., 1997). This can be explained using the model of competitive, normative play described in the previous section. As children grow older, their social environment changes: they become increasingly concerned with garnering positive attention from peers rather than from adults. At the same time, the norms that they are concerned with upholding grow more complex, as they come to include things like avoiding disagreement and deception (neither of which types of norm violation were reported by children in my observational study). Such linguistic norms—including a norm against unjustified negative gossip—may become important in the co-regulation of older children's behaviour, as the earlier regulatory moral support of the adult caregiver is removed.

7.3 Limitations and Research Suggestions

Although the quantitative observational research was probably the strongest part of this thesis, it had several limitations. Firstly, it was based on hand-written observations of a large body of children's discourse: an analysis based on several hours of audio or video recording of focal children would contain fewer examples of tattling, but might allow for finer-grained observation of the motivational and affective dimensions of tattling. Secondly, the analyses of dominance and relational aggression were carried out in separate schools: only tentative conclusions can be drawn from them, therefore, and it would be fascinating to see whether the relationships between these two variables and tattling frequency would generalize to

other schools, and how the three variables would be interrelated if the analyses were carried out in the same school. Thirdly, although two preschools were compared—and tattling took a generally similar form in each, with no robustly significant differences—both schools were in the same city, and so it would be interesting to contrast the results from these schools with results from culturally different populations.

Although it was useful to carry out participant observation in order to provide a counterpoint to the quantitative results, it would have been a good idea to include more intensive and systematic interviewing of preschool staff as part of this process. I might also have investigated methods of questioning the children in this study in a non-threatening way, for example by using a soft toy or puppet to ask the questions, or interviewing them in pairs (see Einarisdóttir, 2007, on ways of enabling young children’s voices to be heard in research).

The experimental studies described in Chapter 5 had numerous limitations, as I pointed out in that chapter. In addition, although I did not gain any interesting results from carrying out my first experimental study in Preschool B, this was a good method of obtaining rich social data about experimental participants, and it would have been worthwhile to run an experiment in Preschool A as well (perhaps even alongside standard treatments from the theory of mind or experimental economics literatures). The use of the CHILDES and eHRAF databases in Chapter 6 was very exploratory, but did highlight the potential of these databases for comparative work. This chapter also prepared the ground for more traditional cross-cultural studies in future, for example by identifying cultures with whom it would be interesting to work, and illustrating the potential of historical change for creating major cultural differences within the same country, even over a span of a few decades.

It should be apparent from Chapter 6 that I regard cross-cultural studies as a vital component of any program of research aimed at testing evolutionary theories. Databases of transcripts and ethnographic records can help to set research in cross-cultural perspective, but a systematic study of tattling, or related forms of discourse, in either school or home in a non-Euro-American cultural setting is urgently needed. A longitudinal study of children's behavioural reporting would also be extremely useful in helping us to understand why and how norms against tattling and indiscreet gossip develop in children's peer groups, and whether they relate to developing understandings of reputation and in-group membership. More focused observational research including audio and/or video recording would help to reveal some of the affective dimensions of tattling, which is especially relevant given the central importance of shame in generating negative consequences for the child whose behaviour is reported in tattling (and the adult whose behaviour is reported in negative gossip). Finally, experimental treatments are needed to investigate the cognitive biases that underpin observed characteristics of children's behavioural reporting, and I outlined some ideas for experimental investigation in Chapter 5. In particular, Study 4 (see Section 5.4.2) may prove useful for comparing the relative contributions of affective response and normative theory (see Section 7.1) to children's reporting of behaviour. Based on the results of Mesoudi et al. (2006) and O'Gorman et al. (2008), respectively, a preliminary hypothesis would be that the normative-theory component of morality would generate a stronger effect on children's recall of events in this sort of paradigm—a story about an unfamiliar third party—because the affective-response component is more egocentric.

I am conscious that in this thesis, I have only begun an exploration of the topic of children's reporting of peers' behaviour; but I have tried to show that it is an

interesting area of research which has implications for several domains of human psychology. In the long term I will continue to give children a voice, and contribute to an understanding of their social and emotional learning, by providing records of other forms of their everyday discourse in educational settings. I hope that my research—along with evolutionary developmental psychology in general—can help to give children a more enjoyable, effective and ecologically appropriate education.

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Appendix A. Informed Consent

The information below was sent out to the parents or guardians of all participants in the second experimental study reported in Chapter 5. Very similar letters were used for the observational study reported in Chapters 3 and 4, and for the first experimental study reported in Chapter 5.

* * *

Q.U.B. INFORMED CONSENT FORM

Project Title: Recall of Social Behaviour by Young Children

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Description: This research project is on the social behaviour of pre-school children. We are focusing on children's reports of other children's behaviour – an early form of gossip. We would like to find out whether children find social information inherently memorable, and how they react to positive and negative information about other children. In the present study, the research assistant will read two stories to each child individually. After each story the assistant will ask the child some questions about the story, and the child's answers will be recorded on a digital voice recorder.

Duration: 15-20 minutes per child.

Benefits: This research will contribute to the scientific understanding of the development of social awareness in children. We hope it will help to distinguish the genuine reporting of bullying activity and dangerous activities from attention-

Appendix B. Example Content Types of Children's Behavioural Reports

Category	Example Content
Physical aggression	<p>“He tried to bited [sic] me”</p> <p>“Jack hurt me with the wheel”</p>
Property damage	<p>“She hit this thing”</p> <p>“Matthew, he’s knocking down the tower”</p>
Property entitlement	<p>“He won’t let me have the scissors”</p> <p>“Mudiwa took two breads”</p>
Social convention	<p>“Both of them 'uns have Power Rangers - I seen them under the table”</p> <p>“They're being very loud”</p>
Joint play violation	<p>“She’s not finished yet [with the paintbrush]; she won’t hurry up”</p> <p>“I wanted to be in there [the box] and Jack pushed it off me”</p>
Taunting	<p>"She's shouting at me"</p> <p>"James said I'm not Superman; James said I'm bad"</p>
Disagreement	<p>“She said she was in a different school”</p> <p>"I stood on Adam’s foot - he said I did it on purpose but I didn't"</p>
Neutral / Non-judgemental	<p>"He didn't get any milk"</p> <p>"He was trying to get in the car and I jumped in first"</p>
Positive report	<p>“Emma gave me a flag”</p>

Appendix C. Examples of Responses to Tattling by Audience

Category	Examples of Response Content
Supporting	Confiscated toys: "You know you're not allowed them." "Tell him I'm not happy about that."
Acknowledging	Said "Does she?" and looked at the dolls. Told tattler that she would talk to miscreant about it (but never seemed to)
Excusing	"That's OK." "It was probably an accident."
Ignoring	Pretty much ignored (probably because the boys had been throwing things too) More or less ignored, because everyone was going down into the playground
Reprimanding tattler	Told tattler not to be fighting "You are all little tell-tales, aren't you—always telling tales on each other!"
Both tattler and miscreant reprimanded	Ascertained that it was an accident, and told both boys to say sorry to each other Called both boys over and told them sternly not to climb on things
Questioning	Asked if it was an accident Questioning interrupted by arrival of boys' mother

Appendix D. Story Text for Experimental Study 1

This appendix contains the full text of all nine stories used in my first experimental study (see Section 5.1). Three stories were read to each participant, one from each of three story settings and conditions. Each story contained six frames.

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
<i>Blocks</i>	<p>1. One day Alice was playing with some blocks. The blocks were really big.</p> <p>2. Alice built a huge tower, taller than she was. She felt very proud of it.</p> <p>3. Then Alice knocked the tower down. That was a lot of fun.</p> <p>4. Alice thought of something else to do. She lined all the blocks up to make a wall.</p> <p>5. Alice looked at her wall. She couldn't see a way through to the other side.</p> <p>6. Alice moved a block to make a gate in the wall. She felt happy.</p>	<p>1. One day Alice and Boris were playing with blocks. The blocks were really big.</p> <p>2. Alice built a huge tower, taller than she was. She felt very proud of it.</p> <p>3. Boris built a huge tower as well. It was even bigger than Alice's tower.</p> <p>4. But Boris's tower was so big that it toppled over. Boris was very sad.</p> <p>5. Alice saw that Boris was sad. She decided to help him build his tower again.</p> <p>6. Soon Alice and Boris had finished building. They were both very happy.</p>	<p>1. One day Alice and Boris were playing with blocks. The blocks were really big.</p> <p>2. Alice built a huge tower, taller than she was. She felt very proud of it.</p> <p>3. Boris built a huge tower as well. It was even bigger than Alice's tower.</p> <p>4. Alice didn't like Boris's tower. She knocked it down to the ground.</p> <p>5. Boris was very sad because Alice had knocked his tower down.</p> <p>6. Alice was sad too. She said sorry and then she gave Boris a hug.</p>

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
<i>Pizza</i>	<p>1. Later that day Boris went to the café. He was feeling very hungry.</p> <p>2. Inside the café he ordered a pizza. The pizza had six slices in it.</p> <p>3. Boris ate up all his pizza very quickly. But he was still hungry.</p> <p>4. He ordered a nice cake as well. The cake had four slices in it.</p> <p>5. Boris was so hungry that he ate up all his cake, as well as all his pizza.</p> <p>6. After that Boris felt tired. He went home to have a nap.</p>	<p>1. Later that day Alice and Boris went to the café. They were both hungry.</p> <p>2. Inside the café they ordered two pizzas. That made six slices each.</p> <p>3. Boris finished all his pizza first. He was even hungrier than Alice was.</p> <p>4. Alice hadn't finished all her pizza. She still had two pieces left.</p> <p>5. Alice wasn't so hungry any more. She decided to give a piece of pizza to Boris.</p> <p>6. Boris was happy because Alice had given him the pizza. He gave her a hug.</p>	<p>1. Later that day Alice and Boris went to the café. They were both hungry.</p> <p>2. Inside the café they ordered two pizzas. That made six slices each.</p> <p>3. Alice finished all her pizza first. She was even hungrier than Boris was.</p> <p>4. Boris hadn't finished all his pizza. He still had two pieces left.</p> <p>5. Alice grabbed a piece of Boris's pizza. Boris felt very sad.</p> <p>6. Alice was sad too. She said sorry to Boris and gave him a big hug.</p>

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
<i>Cars</i>	<p>1. Alice went outside and looked around. It was a lovely day outside.</p> <p>2. Alice went for a drive in her car. She liked her car because it had no roof.</p> <p>3. Alice drove all around the town. The roads were not very busy.</p> <p>4. Alice had to post a letter. She drove along to the post office.</p> <p>5. Alice got out of the car and posted the letter. She felt happy.</p> <p>6. It was getting dark. Alice got back in her car and drove all the way home.</p>	<p>1. Later on, Alice drove round to Boris's house in her green car.</p> <p>2. She asked Boris if he wanted to come out. Boris got on his blue motorbike.</p> <p>3. Alice and Boris drove off together. Then Boris's motorbike broke down.</p> <p>4. Alice felt sorry for Boris. She got out of her car and gave him a push.</p> <p>5. Boris's motorbike started working again. He was very happy.</p> <p>6. Boris said thank you to Alice for helping him. Then he gave her a big hug.</p>	<p>1. Later on, Alice drove round to Boris's house in her green car.</p> <p>2. She asked Boris if he wanted to come out. Boris got on his blue motorbike.</p> <p>3. Alice and Boris raced off along the road. Boris was ahead of Alice.</p> <p>4. Alice didn't like Boris being ahead of her. She bumped into him, hard.</p> <p>5. Boris was very sad because Alice had bumped into him.</p> <p>6. Alice was sad too. She said sorry and then she gave Boris a big hug.</p>

Figure 8. Sample picture from *Blocks* story setting (*Antisocial* condition, Frame 1).



Figure 9. Sample picture from *Pizza* story setting (*Prosocial* condition, Frame 4).



Figure 10. Sample picture from *Cars* story setting (*Asocial* condition, Frame 6).



Appendix E. Question Sheets for Study 1

Blocks setting (Antisocial)

1.	Were the blocks really big, or really small?	Big	<input type="checkbox"/>	Small	<input type="checkbox"/>
2.	Was Alice's tower smaller than she was, or bigger?	Smaller	<input type="checkbox"/>	Bigger	<input type="checkbox"/>
3.	Was Boris's tower bigger than Alice's, or smaller?	Bigger	<input type="checkbox"/>	Smaller	<input type="checkbox"/>
4.	Did Alice like Boris's tower, or did she not like it?	Like	<input type="checkbox"/>	Dislike	<input type="checkbox"/>
5.	Was Boris sad, or happy after Alice knocked down his tower?	Sad	<input type="checkbox"/>	Happy	<input type="checkbox"/>
6.	Did Alice give Boris a kiss, or did she give him a hug?	Kiss	<input type="checkbox"/>	Hug	<input type="checkbox"/>

Café setting (Prosocial)

1.	Did Alice and Boris eat at the café, or did they eat at home?	Café	<input type="checkbox"/>	Home	<input type="checkbox"/>
2.	Did they order one pizza, or two pizzas?	One	<input type="checkbox"/>	Two	<input type="checkbox"/>
3.	Who finished their pizza first, Boris or Alice?	Boris	<input type="checkbox"/>	Alice	<input type="checkbox"/>
4.	How many pieces did Alice have left when Boris had finished, one piece or two pieces?	One	<input type="checkbox"/>	Two	<input type="checkbox"/>
5.	Was Alice full, or was she still hungry?	Full	<input type="checkbox"/>	Hungry	<input type="checkbox"/>
6.	Did Boris give Alice a kiss, or did he give her a hug?	Kiss	<input type="checkbox"/>	Hug	<input type="checkbox"/>

Vehicles setting (Asocial)

1.	Was it a lovely day, or a rainy day?	Lovely	<input type="checkbox"/>	Rainy	<input type="checkbox"/>
2.	Did Alice's car have a roof, or no roof?	Roof	<input type="checkbox"/>	No roof	<input type="checkbox"/>
3.	Were the roads empty, or busy?	Empty	<input type="checkbox"/>	Busy	<input type="checkbox"/>
4.	Did Alice drive to the church, or the post office?	Church	<input type="checkbox"/>	Post office	<input type="checkbox"/>
5.	Did Alice feel happy or sad when she posted her letter?	Happy	<input type="checkbox"/>	Sad	<input type="checkbox"/>
6.	Was it still light, or was it getting dark?	Light	<input type="checkbox"/>	Dark	<input type="checkbox"/>

Blocks setting (Asocial)

1.	Were the blocks really big, or really small?	Big	<input type="checkbox"/>	Small	<input type="checkbox"/>
2.	Was Alice's tower smaller than she was, or bigger?	Smaller	<input type="checkbox"/>	Bigger	<input type="checkbox"/>
3.	Did Alice knock the tower down, or leave it standing?	Knock down	<input type="checkbox"/>	Leave standing	<input type="checkbox"/>
4.	After knocking down the tower, did Alice build a bridge, or a wall?	Bridge	<input type="checkbox"/>	Wall	<input type="checkbox"/>
5.	Was there no way through the wall, or was there a way through?	No way	<input type="checkbox"/>	A way	<input type="checkbox"/>
6.	Did Alice feel sad or happy after moving the block to make a gate?	Sad	<input type="checkbox"/>	Happy	<input type="checkbox"/>

Café setting (Antisocial)

1.	Did Alice and Boris eat at the café, or did they eat at home?	Café	<input type="checkbox"/>	Home	<input type="checkbox"/>
2.	Did they order one pizza, or two pizzas?	One	<input type="checkbox"/>	Two	<input type="checkbox"/>
3.	Who finished their pizza first, Alice or Boris?	Alice	<input type="checkbox"/>	Boris	<input type="checkbox"/>
4.	How many pieces did Boris have left when Alice had finished, one piece or two pieces?	One	<input type="checkbox"/>	Two	<input type="checkbox"/>
5.	Did Boris feel sad or happy when Alice grabbed his pizza?	Sad	<input type="checkbox"/>	Happy	<input type="checkbox"/>
6.	Did Alice give Boris a kiss, or did she give him a hug?	Kiss	<input type="checkbox"/>	Hug	<input type="checkbox"/>

Vehicles setting (Prosocial)

1.	Was Alice's car green, or red?	Green	<input type="checkbox"/>	Red	<input type="checkbox"/>
2.	Was Boris's motorbike yellow, or blue?	Yellow	<input type="checkbox"/>	Blue	<input type="checkbox"/>
3.	Did Alice and Boris drive off together, or separately?	Together	<input type="checkbox"/>	Separately	<input type="checkbox"/>
4.	Did Alice give Boris a lift when he broke down, or did she give him a push?	Lift	<input type="checkbox"/>	Push	<input type="checkbox"/>
5.	Was Boris happy or sad when Alice gave him a push?	Happy	<input type="checkbox"/>	Sad	<input type="checkbox"/>
6.	Did Boris give Alice a kiss, or did he give her a hug?	Kiss	<input type="checkbox"/>	Hug	<input type="checkbox"/>

Blocks setting (Prosocial)

1.	Were the blocks really big, or really small?	Big	<input type="checkbox"/>	Small	<input type="checkbox"/>
2.	Was Alice's tower smaller than she was, or bigger?	Smaller	<input type="checkbox"/>	Bigger	<input type="checkbox"/>
3.	Was Boris's tower bigger than Alice's, or smaller?	Bigger	<input type="checkbox"/>	Smaller	<input type="checkbox"/>
4.	Did Alice knock Boris's tower over, or did it fall down by itself?	Knock over	<input type="checkbox"/>	Fall down	<input type="checkbox"/>
5.	Did Alice help Boris build his tower up again, or did she keep building her own tower?	Help	<input type="checkbox"/>	Not help	<input type="checkbox"/>
6.	Were Alice and Boris sad or happy at the end of the story?	Sad	<input type="checkbox"/>	Happy	<input type="checkbox"/>

Café setting (Asocial)

1.	Did Boris eat at the café, or did he eat at home?	Café	<input type="checkbox"/>	Home	<input type="checkbox"/>
2.	How many pieces did his pizza have, four slices or six pieces?	Four	<input type="checkbox"/>	Six	<input type="checkbox"/>
3.	Was Boris still hungry after he finished his pizza, or was he full up?	Hungry	<input type="checkbox"/>	Full	<input type="checkbox"/>
4.	How many pieces did his cake have, six pieces or four pieces?	Six	<input type="checkbox"/>	Four	<input type="checkbox"/>
5.	Did Boris finish all his cake, or did he leave some of it?	Finish	<input type="checkbox"/>	Not finish	<input type="checkbox"/>
6.	Did Boris go to the cinema afterwards, or did he go home?	Cinema	<input type="checkbox"/>	Home	<input type="checkbox"/>

Vehicles setting (Antisocial)

1.	Was Alice's car green, or red?	Green	<input type="checkbox"/>	Red	<input type="checkbox"/>
2.	Was Boris's motorbike yellow, or blue?	Yellow	<input type="checkbox"/>	Blue	<input type="checkbox"/>
3.	Was Boris ahead of Alice when they raced off, or was Alice ahead of Boris?	Boris	<input type="checkbox"/>	Alice	<input type="checkbox"/>
4.	Did Alice drive past Boris, or did she bump into him?	Drive past	<input type="checkbox"/>	Bump	<input type="checkbox"/>
5.	Was Boris sad or happy when Alice bumped into him?	Sad	<input type="checkbox"/>	Happy	<input type="checkbox"/>
6.	Did Alice give Boris a kiss, or did she give him a hug?	Kiss	<input type="checkbox"/>	Hug	<input type="checkbox"/>

Appendix F. Story Text for Experimental Study 2

This appendix contains the full text of all six stories used in my second experimental study (see Section 5.2). Two stories were read to each participant, one from each of two story settings, with the condition varying between participants. Each story contained ten frames.

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
<i>Story 1</i>	1. Here is Alice in front of her house. Her favourite toy is this doll.	1. Here is Alice in front of her house. Her favourite toy is this doll.	1. Here is Alice in front of her house. Her favourite toy is this doll.
	2. One day Alice was sitting watching TV. She decided to go to the café because she was hungry.	2. One day Alice was sitting watching TV. She decided to go to the café because she was hungry.	2. One day Alice was sitting watching TV. She decided to go to the café because she was hungry.
	3. Alice went outside and got into her green car.	3. Alice went outside and got into her green car.	3. Alice went outside and got into her green car.
	4. Alice drove her car through the town. She went past a police station.	4. Alice drove her car through the town. She went past a police station.	4. Alice drove her car through the town. She went past a police station.
	5. Alice parked her car beside some flowers and walked to the café.	5. Alice parked her car and met her friend Boris beside some flowers.	5. Alice parked her car and met her friend Boris beside some flowers.
	6. Alice was very hungry, so she ordered two pizzas. Each pizza had six slices.	6. In the café, Alice and Boris both ordered pizza. The pizzas had six slices	6. In the café, Alice and Boris both ordered pizza. The pizzas had six slices

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
		each.	each.
<i>Story 1 (cont'd.)</i>	7. Alice ate her pizzas quickly. Soon they were all gone.	7. Boris was very hungry, so Alice gave him a slice of her pizza.	7. Alice was very hungry. When Boris wasn't looking, she grabbed a slice of his pizza.
	8. Alice left the café and got back into her car.	8. Alice and Boris left the café. Alice got into her car and Boris got onto his blue motorbike.	8. Alice and Boris left the café. Alice got into her car and Boris got onto his blue motorbike.
	9. On the way back home Alice's car broke down. She had to get out and walk home.	9. On the way home Boris's motorbike broke down. Alice stopped her car and went over to help him fix it.	9. On the way home Alice crashed into Boris's motorbike. But then her car broke down and she had to get out and walk.
	10. When Alice got home, her doll had disappeared. She couldn't find it anywhere.	10. When Alice got home, her doll had disappeared. She couldn't find it anywhere.	10. When Alice got home, her doll had disappeared. She couldn't find it anywhere.
<i>Story 2</i>	1. The next day, Alice left her house to go to school.	1. The next day, Alice left her house to go to school.	1. The next day, Alice left her house to go to school.
	2. She liked to play with blocks in the classroom.	2. She liked to play with blocks in the classroom with her friend, Charlie.	2. She liked to play with blocks in the classroom with her friend, Charlie.
	3. Alice built a huge tower, bigger than she was.	3. Alice and Charlie both built huge towers, bigger than they were.	3. Alice and Charlie both built huge towers, bigger than they were.
	4. Then she jumped on her tower and knocked all the blocks down to the ground.	4. Then Charlie's tower fell down. Alice helped him build it up again.	4. Alice didn't like Charlie's tower. She jumped on it and knocked all the blocks

<i>Condition / Setting</i>	Asocial	Prosocial	Antisocial
			down to the ground.
<i>Story 2 (cont'd.)</i>	<p>5. After school, Alice went to the post office to post a letter.</p> <p>6. She went to the shelf and got an envelope to put her letter in.</p> <p>7. Then Alice went to the counter and paid for the envelope and a stamp.</p> <p>8. Alice liked posting letters. She went outside and posted her letter in the pillarbox.</p> <p>9. Alice was feeling tired now so she went home.</p> <p>10. When she got into the house her doll had come back again! Alice felt very happy.</p>	<p>5. After school, Alice went to the post office to post a letter.</p> <p>6. She went to the shelf and got an envelope to put her letter in.</p> <p>7. The lady asked Alice to help by posting some other letters at the same time.</p> <p>8. Alice liked to help, so she went outside and posted all the letters in the pillarbox.</p> <p>9. Alice was feeling tired now so she went home.</p> <p>10. When she got into the house her doll had come back again! Alice felt very happy.</p>	<p>5. After school, Alice went to the post office to post a letter.</p> <p>6. She went to the shelf and got an envelope to put her letter in.</p> <p>7. The lady told Alice that she wasn't allowed to post the letter without putting a stamp on it.</p> <p>8. But Alice didn't feel like buying a stamp, so she went outside and posted the letter in the pillarbox.</p> <p>9. Alice was feeling tired now so she went home.</p> <p>10. When she got into the house her doll had come back again! Alice felt very happy.</p>

Figure 11. Sample picture from Study 2, Story 1 (Frame 7).



Figure 12. Sample picture from Study 2, Story 2 (Frame 14).



Appendix G. Question Sheets for Study 2

Story 1 (Asocial)

1.	What is Alice's favourite toy?	Doll	<input type="checkbox"/>	Teddy	<input type="checkbox"/>
2.	What was Alice doing before she went to the café?	Reading	<input type="checkbox"/>	Watching TV	<input type="checkbox"/>
3.	What colour is Alice's car?	Green	<input type="checkbox"/>	Red	<input type="checkbox"/>
4.	What building did Alice drive past on the way to the café?	Hospital	<input type="checkbox"/>	Police station	<input type="checkbox"/>
5.	Where did Alice park her car?	Beside flowers	<input type="checkbox"/>	Beside a tree	<input type="checkbox"/>
6.	What did Alice eat in the café?	Cake	<input type="checkbox"/>	Pizza	<input type="checkbox"/>
7.	How did Alice eat her pizza?	Quickly	<input type="checkbox"/>	Slowly	<input type="checkbox"/>
8.	How did Alice get back home from the café?	By bus	<input type="checkbox"/>	By car	<input type="checkbox"/>
9.	What happened on the way home?	Broke down	<input type="checkbox"/>	Crashed	<input type="checkbox"/>
10.	What had disappeared when Alice got home?	TV	<input type="checkbox"/>	Doll	<input type="checkbox"/>

Story 2 (Asocial)

1.	Why did Alice leave the house?	Go to school	<input type="checkbox"/>	Go to the park	<input type="checkbox"/>
2.	What did Alice like to play with in the classroom?	Jigsaw puzzles	<input type="checkbox"/>	Blocks	<input type="checkbox"/>
3.	Was Alice's tower bigger than she was, or smaller?	Bigger	<input type="checkbox"/>	Smaller	<input type="checkbox"/>
4.	Did Alice's tower fall down by itself, or did she knock it down?	Fall down	<input type="checkbox"/>	Knock down	<input type="checkbox"/>
5.	Where did Alice go after school?	Post office	<input type="checkbox"/>	Sweet shop	<input type="checkbox"/>
6.	What did Alice take from the shelf in the post office?	Parcel	<input type="checkbox"/>	Envelope	<input type="checkbox"/>
7.	What did Alice buy as well as an envelope?	A stamp	<input type="checkbox"/>	A card	<input type="checkbox"/>
8.	Did Alice post her letter inside or outside the post office?	Inside	<input type="checkbox"/>	Outside	<input type="checkbox"/>
9.	Why did Alice go home?	Felt tired	<input type="checkbox"/>	Felt hungry	<input type="checkbox"/>
10.	Why did Alice feel happy when she got home?	House was tidy	<input type="checkbox"/>	Doll reappeared	<input type="checkbox"/>

Story 1 (Prosocial)

1.	What is Alice's favourite toy?	Doll	<input type="checkbox"/>	Teddy	<input type="checkbox"/>
2.	What was Alice doing before she went to the café?	Watching TV	<input type="checkbox"/>	Reading	<input type="checkbox"/>
3.	What colour is Alice's car?	Red	<input type="checkbox"/>	Green	<input type="checkbox"/>
4.	What building did Alice drive past on the way to the café?	Police station	<input type="checkbox"/>	Hospital	<input type="checkbox"/>
5.	Where did Alice park her car?	Beside a tree	<input type="checkbox"/>	Beside flowers	<input type="checkbox"/>
6.	What did Alice and Boris eat in the café?	Pizza	<input type="checkbox"/>	Cake	<input type="checkbox"/>
7.	Did Alice give Boris a slice of pizza, or did he grab it off her?	Grab	<input type="checkbox"/>	Give	<input type="checkbox"/>
8.	How did Alice get back home from the café?	By car	<input type="checkbox"/>	By bus	<input type="checkbox"/>
9.	Did Alice crash into Boris's motorbike, or did it just break down?	Crashed	<input type="checkbox"/>	Broke down	<input type="checkbox"/>
10.	What had disappeared when Alice got home?	TV	<input type="checkbox"/>	Doll	<input type="checkbox"/>

Story 2 (Prosocial)

1.	Why did Alice leave the house?	Go to the park	<input type="checkbox"/>	Go to school	<input type="checkbox"/>
2.	What did Alice and Charlie like to play with in the classroom?	Jigsaw puzzles	<input type="checkbox"/>	Blocks	<input type="checkbox"/>
3.	Was Alice's tower bigger than she was, or smaller?	Smaller	<input type="checkbox"/>	Bigger	<input type="checkbox"/>
4.	Did Charlie's tower fall down by itself, or did Alice knock it down?	Fall down	<input type="checkbox"/>	Knock down	<input type="checkbox"/>
5.	Where did Alice go after school?	Post office	<input type="checkbox"/>	Sweet shop	<input type="checkbox"/>
6.	What did Alice take from the shelf in the post office?	Parcel	<input type="checkbox"/>	Envelope	<input type="checkbox"/>
7.	What did the lady ask Alice to do?	Post letters	<input type="checkbox"/>	Wrap up presents	<input type="checkbox"/>
8.	Did Alice post the letters inside or outside the post office?	Outside	<input type="checkbox"/>	Inside	<input type="checkbox"/>
9.	Why did Alice go home?	Felt tired	<input type="checkbox"/>	Felt hungry	<input type="checkbox"/>
10.	Why did Alice feel happy when she got home?	Doll came back	<input type="checkbox"/>	House was tidy	<input type="checkbox"/>

Story 1 (Antisocial)

1.	What is Alice's favourite toy?	Doll	<input type="checkbox"/>	Teddy	<input type="checkbox"/>
2.	What was Alice doing before she went to the café?	Watching TV	<input type="checkbox"/>	Reading	<input type="checkbox"/>
3.	What colour is Alice's car?	Red	<input type="checkbox"/>	Green	<input type="checkbox"/>
4.	What building did Alice drive past on the way to the café?	Police station	<input type="checkbox"/>	Hospital	<input type="checkbox"/>
5.	Where did Alice park her car?	Beside a tree	<input type="checkbox"/>	Beside flowers	<input type="checkbox"/>
6.	What did Alice and Boris eat in the café?	Pizza	<input type="checkbox"/>	Cake	<input type="checkbox"/>
7.	Did Boris give Alice a slice of pizza, or did she grab it off him?	Grab	<input type="checkbox"/>	Give	<input type="checkbox"/>
8.	How did Alice get back home from the café?	By car	<input type="checkbox"/>	By bus	<input type="checkbox"/>
9.	Did Alice crash into Boris's motorbike, or did Boris crash into Alice's car?	Alice crashed	<input type="checkbox"/>	Boris crashed	<input type="checkbox"/>
10.	What had disappeared when Alice got home?	TV	<input type="checkbox"/>	Doll	<input type="checkbox"/>

Story 2 (Antisocial)

1.	Why did Alice leave the house?	Go to the park	<input type="checkbox"/>	Go to school	<input type="checkbox"/>
2.	What did Alice and Charlie like to play with in the classroom?	Jigsaw puzzles	<input type="checkbox"/>	Blocks	<input type="checkbox"/>
3.	Was Alice's tower bigger than she was, or smaller?	Smaller	<input type="checkbox"/>	Bigger	<input type="checkbox"/>
4.	Did Charlie's tower fall down by itself, or did Alice knock it down?	Fall down	<input type="checkbox"/>	Knock down	<input type="checkbox"/>
5.	Where did Alice go after school?	Post office	<input type="checkbox"/>	Sweet shop	<input type="checkbox"/>
6.	What did Alice take from the shelf in the post office?	Parcel	<input type="checkbox"/>	Envelope	<input type="checkbox"/>
7.	What did the lady tell Alice that she had to do?	Put stamp on letter	<input type="checkbox"/>	Wrap up presents	<input type="checkbox"/>
8.	Did Alice post the letter inside or outside the post office?	Outside	<input type="checkbox"/>	Inside	<input type="checkbox"/>
9.	Why did Alice go home?	Felt tired	<input type="checkbox"/>	Felt hungry	<input type="checkbox"/>
10.	Why did Alice feel happy when she got home?	Doll came back	<input type="checkbox"/>	House was tidy	<input type="checkbox"/>