The Shy Child Adapting to the Challenges of School

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Introduction

Schooling of the form practiced in much of the world presents many challenges to students from the outset. It is a highly social undertaking, requiring from an early age interpersonal interactions outside the home with, initially, unfamiliar adults and other children. To be sure, children who attend nursery or preschool settings have some experience of this before attending school, and their behavior in these settings has been the focus of a substantial body of research, including systematic research into behavioral inhibition (BI), shyness and social withdrawal. Nevertheless, formal schooling poses many challenges over and above those faced during free play with same-age peers. The schoolchild spends a substantial proportion of daily life attending an institution where he or she will participate alongside their peers in settings that include up to 30 or so other children. Effortful engagement in learning is expected and attainments are tested in various ways. Tasks are set and children's performance will be regularly monitored and evaluated. All of this will be overseen by a teacher and perhaps other adults based in the room. Adults will praise, express disappointment, and punish. Certain kinds of rule following and demands upon focused attention will be made. Some activities will be shared with classmates, whereas others will be undertaken alone. Talking and silence will be regulated and children will be socialized into the context-specific rules governing talking.

Students are often expected to speak up in front of the rest of the class, to answer a teacher-directed question, to respond to a point made by another student, or to volunteer information, and the teacher's responses to these contributions are often public. Indeed, the use of spoken language is a crucial area in learning, in conceptual development, the acquisition of knowledge and skills, and demonstration of their acquisition. Answers spoken aloud facilitate formative assessment, providing

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the teacher with an indicator of students' progress, their answers revealing what they know and understand and what they do not, and helping the teacher plan future lessons. In much schooling, learning in classrooms is primarily a public affair.

Out of the classroom and in the playground, the novice student will encounter fellow students who are perhaps 6 years older than he or she is. Cohorts will move up through the school annually, encountering new teachers, until children are among the oldest and will face the challenges of starting a new school, where once again they will be among the youngest. Social relationships and friendships are important in all of this. We know from personal experience, anecdotal evidence, and educational research that friendships form a significant part of school life as are more unpleasant kinds of relationships such as bullying that can include physical aggression, social ostracism, name-calling, and so on.

This is all so familiar that we may pay insufficient attention to the acculturation that is entailed and the extensive, ongoing adaptations that are required of all students. Furthermore, while in some roles students are passive participants in school-generated procedures, in many other respects, they contribute to shaping their experience through the attributes they bring with them and the reactions they elicit from teachers and their peers. They do so within a preexisting culture. Individual teachers will be known by reputation for their strictness, fairness, kindness, and so on, knowledge that is passed through the school and may be available to the student prior to joining a class for the first time. Some preexisting classroom roles are available to be filled: the bright child, the "swot," the "nerd," the lazy child, the scruff, the chatterbox, the joker, the "clown," the bully, and so on. Social identities are constructed; thus, for example, nicknames—pleasant or cruel—are assigned when children come to learn more about one another, their family background, and circumstances. Classmates' skills, aptitudes, and sporting prowess will become evident and form part of their identity within the group. A child's experience of school will help shape his or her identity in diverse ways, but it in turn will also be influenced by their developing sense of self.

Silence and Participation

One of the key features of this acculturation is the management of talk and silence. Silence has diverse functions in social interaction, including serving as a communicative device in its own right. It is an element of turn-taking in conversation that the teacher has to manage so that the class will pay attention to her or him, to ensure that unwanted talk does not interfere with learning and that not everyone speaks at once, and to provide every individual with an opportunity to contribute. Pauses during a speech turn can have various meanings, indicative of ongoing thinking or uncertainty about the appropriateness of continuing a line of conversation.

When we discuss the silence in the context of shyness, we imply that shy students speak less than is appropriate. However, the reticence characteristic of shyness can be due to many causes; thus, it may reflect failure to understand the material

under discussion or the student's disengagement from it. Cultural factors play a role. For example, due to increased social mobility and immigration into Western countries, it is common to find children in school for whom English is not their first language and who may not hear it or speak it at home; difficulties of comprehension and competence or confidence in spoken language can result in shy-like behaviors in school (Schultz, 2009, p. 53).

Disengagement is another reason for silence. It can be either temporary or reflect an enduring means of coping with school. For example, Pye (1989) writes of "invisible children" who conceal themselves from teachers' view. It is their way of adapting to the demands of school and the perceived attitudes of teachers toward them by adopting a self-protective tactic of passive withdrawal. It takes the form of "assiduously maintained mediocrity in work of just sufficient quantity to escape rebuke, lowered gaze, making your presence as unrewarding as possible when contact with a teacher is finally unavoidable" (Pye, 1989, p. 38). Silence can be chosen and be strategic, a form of coping with the circumstances in which the child or young person finds him- or herself. This can include emotions and mental states such as truculence, sulking, boredom, defiance, and anger. These states are distinguishable by accompanying facial expression, gesture, and posture, and can be further subdivided, for example, Gilmore (1995, p. 148) distinguishes submissive and nonsubmissive silent subordinate displays. Children are socialized into the constraints on emotion displays as well as the appropriateness or otherwise of silence, such that, for example, an angry face after being reprimanded by a teacher can result in further punishment as will a silence or gaze aversion that is perceived as insolent. A student might use silence in confrontation with a teacher as an attempted display of power, a challenge to the teacher that he or she does not "hold all the cards."

These examples dwell on the unwanted use of silence in the classroom from the teacher's perspective but quietness can have positive, adaptive value. It has many meanings and serves several functions. Ollin (2008) identifies 14 uses of silence in the classroom that can be observed, including the extent to which the teacher uses silent "slow time" to enable students to absorb material with which they have been presented; it can provide space for reflection, for listening. It can also serve as self-protection, not only as a form of disengagement, hiding ignorance, lack of preparation, lapse in concentration, or low self-confidence; Schultz (2009) provides the example of a gay student whose reticence helps her avoid the anticipated censure of classmates.

How do shy students in particular adapt to the classroom? Are there specific areas of school life that are especially challenging? From a different perspective, are there areas where shy students have positive qualities to offer? To what extent do children bring their shyness to school with them and to what degree does reticence represent a coping mechanism for what they find there? Addressing these questions through empirical research requires some consensus on the nature of shyness, and this remains problematic given the term's status as both an everyday concept and as a technical construct within psychology.

This chapter continues with consideration of this issue before surveying research into aspects of the school experiences of shy children. We shall see that the

correlations between shyness and measures of educational outcomes tend to be negative, implying that, in aggregate, shy students encounter greater difficulties in these learning environments than do their less shy peers. Nevertheless, the coefficients are modest; while there are many possible reasons for this, one that has the potential to add significantly to our understanding is that other factors serve to either attenuate or amplify the relation between shyness and educational outcomes.

This chapter emphasizes adaptation, but we should keep in mind that this is a two-way process: Schools are obliged to adjust to the individual needs of their students. In pursuit of this goal, individual teachers adapt their pedagogic strategies in order, for example, to get the most out of students who are hesitant about contributing to classroom interactions. This obligation poses challenges to busy teachers who have to manage a group of up to 30 individuals and where the greater emphasis in effective classroom management is on minimizing disruptive behaviors of various forms and degrees. Nevertheless, there is evidence that teaching style can make a difference to shy students (Coplan & Rudasill, 2016; Evans, 2010, provide overviews).

The Nature of Shyness

One of the problems facing research in this area is the diversity of constructs in use—shyness, conflicted shyness, BI, social reticence, social withdrawal, anxious solitude, and social anxiety (Coplan & Rubin, 2010)—and this is heightened by researchers', teachers', and students' use of the terms "shy" and "shyness," which are current in everyday vocabulary and, like many widely used words, have no precise referent. It is helpful to make distinctions between state and dispositional shyness, between observed and inferred shyness, and between shyness as description and explanation.

State shyness is evident in expressions such as "she looked at me shyly," "I was suddenly overcome with shyness." It refers to a transient experience that typically takes the form of reticence, volunteering few contributions to social interactions and keeping in the background on social occasions. It may also be displayed by bowed head, failure to make eye contact, and signs of unease and anxiousness such as blushing or stammering. We can also experience feelings of shyness that go unnoticed by others. There are unresolved issues here for research. What is the relation between shyness and embarrassment? Both share many characteristics: feeling self-conscious, fluster and uncertainty how to behave, blushing, and avoidance of eye contact. Both can be subjectively unpleasant states, but whereas the prosocial benefits of embarrassment and blushing for the individual and for the group have been extensively studied, little research has, until recently, and as reflected in this volume, approached shyness from this perspective. Recent studies of the positive expression of shyness draw upon designs and experimental manipulations that are commonly used in research into embarrassment, for example, presenting a speech (Poole & Schmidt, 2019) or singing (Colonnesi, Napoleone, & Bögels, 2014) in

front of an audience. Where this research has not included dispositional shyness in its design, it is difficult to conclude whether participants' experience under these conditions is better described as shyness or embarrassment. State shyness also implies that shyness is context-dependent. There are situations where most of us feel shy and others where the shyest of us come "out of our shell."

Shyness is a label that we apply not only to a state but also to an individual's disposition. We use it to explain behavior. This is bidirectional: "She's quiet because she's shy"; "he's shy because he's quiet." Self-attributed shyness takes an explanatory form. Individuals who describe themselves as shy attribute their reticence to their own characteristics, not to the constraints or challenges of the situations they are in. They explain it in terms of inhibition, that is to say, they are willing to participate but find it difficult to decide upon the appropriate words; they over-rehearse possible contributions or track the conversation but are unable to find an opportunity to interject and make themselves heard. They feel anxious, fearful that what they say will be thought foolish or reveal their ignorance, so they avoid attracting the attention of others. This pattern often entails the distinctive psychological state of self-consciousness, the salient awareness of oneself as a social object, and this acts as a restraint on spontaneous involvement. Sometimes, others present notice silence and attribute it to shyness; alternatively, they may attribute it to indifference to other people or failure to make an effort to join in. Or their silence may not be noticed in the ongoing hubbub of school life.

Despite its ubiquity, dispositional shyness is a complex phenomenon and psychologists identify cognitive, physiological, and behavioral components (see Chapters "The Study of Behavioral Inhibition and Temperamental Shyness Across Four Academic Generations" and "Adaptive Shyness: A Developmental Perspective", this volume). It may therefore be an oversimplification to assume that it necessarily takes the same form at different ages and in all shy individuals or that its correlates are consistent. For example, one shy child makes contributions to classroom discussions despite feeling anxious about doing so, whereas another student is regarded by their teachers as shy but is quite comfortable with their quietness. I return to this point after an overview of research into shyness at school.

A distinction that is increasingly made, and is represented in this volume, is between positive and negative aspects of shyness. The predominant emphasis in psychological research has been on shyness as a form of anxiety that can have unfortunate consequences for the shy child and is predictive of the clinical condition of social anxiety disorder (SAD). From this perspective, shyness is something to overcome, to grow out of, and to be helped with. Nevertheless, shyness can be associated with positive qualities such as good listening skills and willingness to get along with fellow students, and its expression can produce social benefits. For example, its positive expression in early childhood can help regulate anxiety and serve a useful social function (Colonnesi et al., 2014; Poole & Schmidt, 2019). The display of shyness might serve a protective function in students: discouraging a sensitive teacher from calling upon him or her to contribute. Shyness may be a socially acceptable reason for reticence. Indeed, a focus on helping quiet children to

overcome their shyness might neglect the positive functions that reticence serves for the individual learner and for the class.

Treating shyness as homogeneous can be misleading in that different varieties of positive and negative shyness can have differential outcomes in terms of school adjustment. Furthermore, other characteristics of the child or particular features of the situation may moderate the influence of shyness upon adjustment or act as a buffer against the stresses of school life.

This draws attention to a further distinction, between shyness and introversion. Extraversion–introversion is a dimension of personality that has consistently emerged in multivariate analyses of personality questionnaires, from the pioneering work of R.B. Cattell and H.J. Eysenck to the currently dominant Big Five model of personality structure. Eysenck and Eysenck (1969) distinguished between introverted shyness and neurotic shyness, a distinction that anticipated later classifications such as social preference (non-fearful preference for solitude) and social withdrawal due to fear and anxiety (Coplan & Rubin, 2010). The latter form is distinguished in terms of motivation, conflict, and subjective feelings rather than with reference to overt behaviors. Research into positive aspects of shyness ought to be aware of this double meaning of shyness if confusion is to be avoided, but there is another reason for referring to introversion in this chapter. Two studies with very large samples undertaken with the Eysenck personality measures in the 1960s showed that extraverts had higher attainments on nationally set tests at elementary school but that introverts fared better at secondary (high) school (see Crozier, 1997, for a brief overview). There was also a significant interaction effect involving neuroticism: Among girls in the sample, only 9% of introverted girls high in neuroticism passed the national examination that selected the top 25% for a grammar-school education compared to 23% of girls high in both extraversion and neuroticism (Entwistle, 1988). Extravert students performed better than their introvert peers in primary school, but this relationship was reversed when they changed school around the age of 11 years and the superiority of introverts persisted through university. This pattern has been interpreted in terms of the change in forms of teaching and learning from emphasis on social interaction in the classroom in elementary school to assessments that draw more upon on private study and written work (Eysenck, 1978). These studies indicate the importance of taking into account changes in the form of pedagogy across the school years.

Although the factors of extraversion and neuroticism "live on" in the Big Five model, they have not figured much in studies of shyness and school adjustment; Tõugu and Tulviste (2017) provide an exception, reporting findings from a study of 3- to 6-year-old children in Estonia that indicated that extraversion and emotional stability were significantly, albeit moderately, associated with a measure of expressive vocabulary. I return to shy children's vocabulary test performance in a later section. A study by Ash, Rice, and Redwood (2014) illustrates the significance of distinguishing between shyness and low sociability in their study of withdrawn behavior among children aged between 6 and 13 years whose first language is not English (ELL) and who are learning the language in American schools. ELL students' shyness was context dependent—they were rated by mothers and rated

themselves as shyer in the English context than in their native language—but there were no equivalent differences on ratings of unsociability. This study shows the importance of taking social context into account when interpreting children's withdrawn behavior.

One final distinction is between difficulties in encountering strangers and fear of negative social evaluation as triggers of shyness. Kagan's influential construct of BI to the unfamiliar (Kagan, 1994; Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984) stresses the role of novel experiences and unfamiliar people. However, apart from when starting a new school or encountering a new class teacher, many children continue to show shyness even in familiar settings when they move through the school in tandem with the same cohort of classmates. Their anxieties relate to social evaluation concerns rather than to unfamiliarity. This distinction is reflected in schoolchildren's conceptualizations of shyness (Crozier & Burnham, 1990; Yuill & Banerjee, 2001) and ought to be kept in mind when considering shyness across the school years.

Shyness and the Experience of School

A substantial body of research has built up a picture of the mostly negative correlates of childhood shyness. At least three kinds of research areas can be identified: educational attainments, adjustment to school and the factors that mediate between shyness and adjustment, and shyness as predictive of social anxiety.

Shyness and Attainments

Despite the diversity of conceptualizations, there are consistent findings indicating that shyness, however defined and measured, can be a problem in school. Shy children obtain relatively lower attainments in primary/elementary school (Bayram Özdemir, Cheah, & Coplan, 2017; Crozier & Hostettler, 2003; Evans, 2001, 2010; Hughes & Coplan, 2018). Evans (2010) reviewed 26 studies published between 1972 and 2009 that incorporated a range of measures of shyness including self-reports, classroom observations, peer and teacher nominations, and teacher and mother ratings on standardized checklists. Measures of attainment relied on scores on standardized tests and eschewed teacher ratings, since there is evidence of teachers' tendency to underestimate shy students' ability relative to their performance on standardized tests (Hughes & Coplan, 2010). Evans (2010) concluded that while the correlations between shyness and attainments are consistently negative, "the association, when found, is generally modest, with correlations indicating between 5% and 12% of shared variance in the domains of both literacy and numeracy" (p. 195).

As an illustration of research not included in the review, Kirsten Hostettler and I (Crozier & Hostettler, 2003) constructed a sample to serve as a comparison group to

students identified by their teachers as shy. We selected students solely based on their location on the same classroom register as the shy students (to avoid comparing extreme groups on the shyness dimension, which makes interpretation of differences uncertain). Teachers did not choose these participants nevertheless rated them for shyness. The correlations within this sample between shyness and scores on nationally administered educational attainment tests were $r = -0.43$ for English and $r = -0.34$ for Mathematics (both ps < 0.01; $n = 122$). These findings suggest the consistency of the relation between shyness and attainments, given that the sample presumably excluded the shyest children, who had already been identified by the class teachers.

Given the connection between shyness and reticence, it is unsurprising that there is a substantial literature relating shyness to measures of language development. Evans (2010) reviewed 47 published reports, dating from 1948 to 2009. Again, the sample of studies included diverse measures of shyness. Measures of language performance included analysis of spontaneous speech, for example, the number of spontaneous comments and the mean length of utterance during free play, in interaction with researchers or peers, or in speaking up in front of classmates and teacher in "show and tell" sessions in the classroom. Measures also included standardized assessments of language development such as expressive vocabulary, receptive vocabulary, and language comprehension. Once more, the direction of findings is consistent, the correlations are negative but modest, and the scores of shy children are close to test norms. However, the studies do not encompass the range of school ages. The majority of studies (26 out of 47) involve children below 6 years. Eight of the remaining 19 studies involve participants diagnosed with selective mutism, which ought to be distinguished from shyness. There is a dearth of studies with high school students, and we have no longitudinal designs that follow children through the school years. To my knowledge, there are no published systematic reviews that include estimates of effect sizes. When I was preparing an earlier article for publication (Crozier & Hostettler, 2003), I computed effect sizes for 20 data sets provided in 10 publications that were available to me at the time. The ages of participants in these studies ranged from 2 to 10 years, with a median of 6 years. (These publications are marked in the reference list with an asterisk). The mean value of r (Rosenthal, Rosnow, & Rubin, 2000) for vocabulary tests was 0.296, $s = 0.14$, range from 0.11 to 0.52. Separate analyses for expressive and receptive tests produced $r = 0.313$ ($s = 0.13$) for expressive tests and $r = 0.246$ ($s = 0.14$) for receptive tests. These data are consistent with the conclusion that shy children tend to obtain lower scores, but the differences are small overall and are somewhat larger for expressive tests.

One unresolved issue is whether shy children's relative underachievement on the standardized test scores reflects their underlying competence or is influenced by performance factors such as anxiety about being tested. Coplan and Evans (2009) propose four explanations of reported differences briefly summarized as follows: (1) the shy child's reticence restricts opportunities to develop language skills; (2) social-evaluative anxiety about giving incorrect answers in the presence of others; (3) risk aversion; (4) studies have compared extreme scorers on the shyness

dimension, making it unclear whether differences are due to shy participants' deficiencies or the superior performance of the least-shy children.

Arguments for an explanation in terms of competence draw upon findings that the differences in performance are obtained within the same sample on measures of reticence during social interaction, on tests of expressive vocabulary where a spoken response is required, and on tests of receptive vocabulary, where less anxiety might be expected. Hostettler and I (Crozier & Hostettler, 2003) approached the issue of performance anxiety directly by testing 10-year-old shy and less shy children under three conditions: Standardized one-to-one testing requiring oral response; standardized one-to-one testing requiring written response; printed questions and written responses. The predicted interaction was found, and shy scores were significantly lower in the one-to-one testing condition. There were no parallel differences on tests of arithmetic ability in equivalent conditions. Evans (2010) speculates that our finding may reflect the fact that the participants were older than those typically investigated and who perhaps have more pronounced social-evaluative concerns. This hypothesis deserves to be tested, but in itself it adds weight to the argument that the language test performance of older students ought to be assessed.

The complexity of associations between shyness and vocabulary is evident in a more recent study of preschool children reported by Rudasill et al. (2014). The authors report correlations of $r = -0.25$ ($p < 0.05$) and -0.18 (*n.s.*) between teacher ratings of shyness and children's scores on receptive and expressive tests, respectively, although correlations between shyness and both forms of tests were significant when parental ratings of shyness were also incorporated in a multilevel model. It is difficult to work out why this should make a difference. It is worth pointing out that the expressive test was administered after the receptive test for all children, so they might have become more comfortable with the test situation. A factor analysis (albeit with sample size of only 104) of the shyness measure (the Children's Behavior Questionnaire; Ladd & Profilet, 1996) identified two factors, which they labeled shyness and low sociability, respectively. When these factors were added to the multilevel model, the only significant predictor of language performance involved parent-rated low sociability, which was positively associated with expressive vocabulary. There are so many factors of definition, sampling, and measurement in this body of research that it is difficult to obtain a clear understanding of the influence of shyness upon children's language development.

In an attempt to distinguish performance and competence explanations of language test scores, Smith Watts et al. (2014) employed a longitudinal, latent growth model design with a large sample ($n = 816$) of toddlers tested at 14, 20, and 24 months, concentrating on measures of BI provided by observers and parents. Measures of expressive and receptive language development were administered at all three ages, and the aim was to test competing hypotheses about the connections between BI and development. The significant negative correlation found between BI and language test scores replicated previous research findings, but the relation was stronger and more consistent on expressive measures than on receptive measures and the overall pattern of results provided stronger support for a performance

explanation in terms of shy children's reticence in the test situation rather than language deficits or delay.

A single set of findings is insufficient to rule out explanations in terms of competence given the consistency in findings across different forms of test summarized earlier. Ideally, we would decide on the basis of insight into the processes involved. Do developmental experiences associated with children's reticence result in their having a smaller vocabulary and if so what are these experiences and what are the specific processes involved? Hilton and Westermann (2016) have investigated psychological processes involved in vocabulary acquisition. They examined the performance of thirty-two 24-month-old children on a "fast mapping" task where participants have to match a pseudo-word to a novel object when this object is presented alongside familiar objects that have known names. Performance of young children on fast mapping tasks has been shown to illustrate the processes involved in vocabulary acquisition. Shy children in this study performed significantly less well on the mapping task, and they were less successful in retaining the novel pseudo-word. Hilton and Westermann (2016) defined shyness in terms of a temperamentally based aversion to novelty, and they reasoned that because performance on the fast mapping task is known to be subject to novelty bias shy children's aversion to novelty results in reduction of the effect of novelty bias. Again, this is a single study with very young participants, and we do not know whether novelty aversion is sufficient to explain consistent findings about language development and about the difference in older children's performance on expressive and receptive measures.

The correlations reported in the literature are modest, but we must take into account the substantial population variation that exists on measures of educational attainment and language development due to factors such as socioeconomic status, parental education, gender, and even maturity differences within a single classroom; one would expect correlations with personality variables to be modest if these factors are not taken into account. We should also note that even when shy students obtain statistically significantly lower scores than their less shy peers, they obtain scores within the expected range on standardized tests. Their language development is not a problem in itself.

Nevertheless, differences have educational implications. As we noted in the Introduction, students' active verbal participation is a key element of the teaching and learning process and factors that impede this participation ought to be addressed in research into classroom management. Psychological analysis has a contribution to make here and helpful advice for teachers is available in publications by, for example, Evans (2010) and Coplan and Rudasill (2016). However, these recommendations, perhaps necessarily, tend to be "broad brush" and lack detail at a practical level. We require more observational research into classroom interactions.

Finally, language and communication competence can serve as a protective factor for shy children. For example, Coplan and Armer (2005) reported support for the hypothesis that competence, as represented by expressive vocabulary test scores, moderated the influence of shyness upon teacher-rated social behavior and need for teacher attention. This hypothesis requires further investigation: The participants were preschool children. Will the buffer effect be found in school? Is the finding specific to expressive vocabulary, or to linguistic competence more generally, or to

the kinds of cognitive abilities that lead to success in school? Do the findings imply that practice on communication skills would help shy students adjust better to school?

Shyness and Adjustment to School

A substantial body of research investigates shy children's experience of school in terms of quality of social relationships, assessed by measures such as peer acceptance, popularity and susceptibility to rejection or victimization. Shyness implies psychosocial challenges in peer relationships: It is associated with having a limited number of friends; a shy child may have one stable friendship, which may be with a child who experiences similar psychosocial difficulties (Rubin, Coplan, & Bowker, 2009). They may also be at risk of "passive victimization" by their peers (children nominated by their peers as both victimized and low in aggression; Hanish & Guerra, 2004), which they can trigger by presenting themselves as physically and emotionally weak and unlikely to retaliate (Rubin, Kennedy Root, & Bowker, 2010). They may then use social withdrawal as a strategy to cope with victimization (Gazelle & Rudolph, 2004), creating a transactional cycle where an initially shy child is victimized and responds by withdrawal which is followed by further victimization (Rubin et al., 2009).

Research also investigates adjustment to school, defined in terms of liking of school, avoidance and absences, cooperative participation in the classroom, capacity for independent work, and need for extra teacher attention (see Evans, 2001, 2010, for overviews). Mediating and moderating factors on adjustment include other characteristics of the child such as inhibitory control (Sette et al., 2018), loneliness (Bayram Özdemir et al., 2017), vocabulary test scores (Coplan & Armer, 2005), and aspects of the school environment such as teacher–child relationships (Arbeau, Coplan, & Weeks, 2010) and classroom emotional climate (Gazelle, 2006). In general, significant interaction effects have been identified in this research, showing that there are factors that mitigate (vocabulary; teacher relations, classroom climate) and accentuate (inhibitory control; loneliness) the negative implications of shyness. Once again, this research is restricted by a concentration on younger children, including preschool children. Coplan and Rudasill (2016) note that quality of teacher–student relationships is a protective factor in the personal interactions that preschool allows but that shy students are less likely to attract the teacher's attention in later years.

Shyness and Social Anxiety

Shyness in early childhood is predictive of social difficulties later in life; nevertheless, it is important to keep in mind that the relations are correlational and much of the variance in outcome measures is unaccounted for. There is moderate stability

from early childhood into toddlerhood and later childhood in BI; nevertheless, only a minority of children show high stability of BI and shyness over time. Degnan et al. (2014) identified different trajectories from BI at ages 2 and 3 to social reticence, including with an unfamiliar peer and during free play at ages 2, 3, 4, and 5 years. Children with a high-stable social reticence trajectory (reticence at 2 years that was consistent over time) comprised 16% of the sample and obtained significantly higher scores on a measure of internalizing problems than did members of the other trajectories groups. A similar picture is evident when we consider the relations between shyness and social anxiety: Measures of shyness taken in the early years predict subsequent social anxiety, shyness, and internalizing problems, but the correlations are modest (see Crozier, 2014, for a review).

Similarly, although longitudinal studies conclude that infant and childhood shy and withdrawn behaviors are statistically significant risk factors for SAD (for reviews, see Gazelle, 2010; Rapee, 2010), large numbers of children diagnosed with SAD had not previously displayed BI and equal numbers of BI and non-BI children were later diagnosed with SAD (Gazelle, 2010). Furthermore, a separate line of enquiry finds that only a minority of adults who meet diagnostic criteria for SAD report having been either shy or extremely shy as children (Burstein, Ameli-Grillon, & Merikangas, 2011; Cox, MacPherson, & Enns, 2005). A meta-analysis of longitudinal studies predicting SAD in later childhood and adolescence from BI undertaken by Clauss and Blackford (2012) reported a strong relation within the seven studies that met their inclusion criteria, namely, a highly significant odds ratio of 7.59 relative to control groups. Overall, 43% of BI children across the studies met diagnostic criteria for SAD, compared with 12% of non-inhibited children. The odds ratios include two discrepant values of 41.53 and 24.21 obtained when participants in two of the studies were assessed for BI and SAD only 2 years apart (on average). BI is a predictor of SAD; notwithstanding this finding, 57% of BI did not meet diagnostic criteria of SAD.

Retrospective and prospective research designs face methodological difficulties. Shyness is measured in different ways at different ages, and there are moves from observational studies of behavior in the laboratory in infancy and early childhood to reliance during the school years on teacher and parent rating scales and checklists and eventually to incorporation of children's self-reports on questionnaires and in interviews. The concerns of shy children change over time just as the nature of their fears change with growing maturity (Crozier, 2014). Social-evaluative concerns come to the fore and reach a peak at adolescence. Furthermore, shy, inhibited, and reticent behaviors will be influenced by parental attitudes and behaviors in various ways, including the adoption of parental protective strategies such as colluding with the child in avoidance of novel social situations, speaking up for their children if this is not feasible, or making the excuse that the child is shy. Evans and Ennis (2017) provide a relevant illustration of this. They identified protective practices that parents adopted when helping their child read difficult words during shared reading: Shyer children were less likely than their less shy peers to make a guess at a word and more likely to pause for or ask for assistance; their parents were less likely to encourage their child to try again or provide the child with clues, and they showed

a greater tendency to supply the answer to the child. Such an approach fails to increase the child's confidence and denies practice in the use of strategies for word identification.

To complicate the picture, there are age-related changes within the child in his or her ability to regulate behavior, to develop strategies in order to overcome, reduce, or disguise difficulties, and to reflect on themselves and their difficulties. For all of these reasons, not to mention the issue of the reliability and validity of assessments made by teachers, parents, and children, there are limitations on the magnitude of correlation coefficients that can be expected.

There is a dilemma here for schools and parents. On the one hand, shy behaviors are regarded as predictive of SAD and the child may benefit from some kind of preventative intervention; on the other hand, it can be argued that normal behaviors are being pathologized. To what degree is identifying shyness as a problem helpful for the child or for the school? Shyness can be an unpleasant experience that impacts upon development into adulthood, being associated with loneliness, difficulties in forming friendships, social and academic problems at school, and so on. These should not be underestimated. Shyness that persists over time does give grounds for concern since such children are at risk for developing internalizing disorders. The school years are significant for children both at the time and for the future, and reticence and adoption of self-protective strategies may interfere with their learning and adjustment. However, there is a risk of overemphasizing the negative when talking about young children's shyness and withdrawn behavior. A balance needs to be drawn, and this will be assisted by research into the factors that mediate and moderate shy children's adjustments to school.

Volunteering an Answer in Class

One common pedagogical technique in a teacher's repertoire is to pose a question to the class and either choose a student to answer or invite members of the class to volunteer an answer, typically by asking them to raise a hand. Shy children are often reluctant to do so, even when the teacher believes that the child knows the answer. This is intuitively understandable as an illustration of social reticence, but it may be useful to analyze this more closely by adopting the child's perspective and construing his or her reluctance in decision theoretical terms. This approach might also throw light on other aspects of shy children's reticence including their apparent underachievement on tests. In addition to the student's confidence in an answer—or the subjective probability of being correct—we need to take into account the values or "utilities" of the outcomes, that is, the gains and losses associated with volunteering. This can be analyzed in terms of signal detection theory (Bateson, 2016) or in terms of classical subjectively expected theory or prospect theory (Kahneman & Tversky, 1979). The costs of not volunteering are negligible in a social sense since either other students will do so or, if no one does, the shy student will not be in a

different position from anyone else. However, there may be educational costs for the individual as I discuss in the following.

Gains and losses would apply to all students but here I concentrate on shy students, hypothesizing that social costs are more prominent for them. Lack of confidence is not restricted to them but they are more concerned than their less shy peers about the consequences of public failure. Social costs can also be associated with correct answers; by drawing attention to yourself you may be called a "swot" or "nerd" or show-off: "Who does she think she is?"

What determines the subjective probability of correct and incorrect answers? Memory is accessed by a process of "bringing into consciousness" and a potential answer that is retrieved can be accompanied by a "feeling of knowing" that varies in strength from doubt to certainty. Feelings accompanying a candidate answer may be clearly either strong or weak in the matter of factual questions requiring brief answers. However, some answers require an element of judgment or approximation, which can add uncertainty (I may not remember the exact year that Neil Armstrong set foot on the moon but guessing nowhere near the year would be a conspicuous error). They might also require the composition of a lengthier answer or some element of computation. More generally, there is always some uncertainty surrounding any question: Have I heard or understood it correctly? Is it as easy as I think it is or am I missing something here? I might look to the teacher or classmates for cues to this: Do the teacher's mannerisms suggest it is a hard question? Do other students look puzzled or are some hands raised already? Some students will answer a question impulsively but others will be more circumspect, often rehearsing a possible answer subvocally before committing to utter it.

Subjective probability is not only a matter of the specific question that is posed; it is also influenced by one's past experiences of success and failure in answering questions in class and, more generally, one's confidence in the subject matter being studied. Here, we must also take into account attributions for success and failure. Shy individuals tend to attribute their social difficulties to their own characteristics rather than to the difficulties inherent in the situation, and this bias can undermine confidence in public performance. Failure to credit oneself for successes and a tendency to accept the blame for failures both undermine confidence and contribute to continuing anxiety in class. This bias will also influence the appraisal of benefits and costs of responding and indeed costs can also feed into the mental calculation of probability: High costs might exaggerate the chances of failure occurring.

The utility of a successful outcome resides in the response of the teacher and possibly fellow students. It also resides in the sense of achievement and the sense of an obstacle overcome. What are the costs? How serious a wrong answer is will be a function of several factors. Ought you to have known the answer? Has the class just covered this topic so that your incorrect answer will reveal your lack of attention or failure to understand something that has recently been explained? Are you expected to know the answer in the sense that it ought to be within the grasp of someone at your stage of learning? Another factor is the response of the teacher, which can be tolerant or generous but can also be sarcastic, critical, punitive, or show you up in

front of the class. There will also be the response of classmates who might laugh or groan or tease you afterwards.

Decision theory proposes a threshold or response criterion that has to be attained before an answer is uttered. This criterion takes into account both the "feeling of knowing" that the possible answer that is generated is the correct one and the utilities associated with correct and incorrect spoken responses. Decision-making is a dynamic process; values assigned to subjective probabilities and utilities are not fixed and will be influenced by contextual factors. From this perspective, there are four possible outcomes: A correct answer is uttered; an incorrect answer is uttered; a correct answer is withheld—a missed reward; an incorrect answer is withheld—a loss avoided. The location of the criterion influences the relative frequencies of these outcomes. A pessimistic bias (Bateson, 2016)—that we can assume characterizes a shy student—sets a high criterion that results in a bias toward not making a response. The student experiences a low rate of failure but pays for this with a high rate of missed rewards. In social comparison terms, a feeling of regret might be higher if a fellow student provides the answer that the shy student had in mind and she sees the other student receiving praise or congratulation. However, the bias might have more serious educational implications if, as many psychologists argue, an active response followed by personal, focused feedback is more important for learning than a passive response followed by generalized feedback.

Setting a high criterion is effectively similar to adopting what in cognitive behavioral treatment for SAD is termed a safety behavior, a self-protective defensive strategy that functions to cope with anxiety in social settings. It minimizes social failure but carries the costs of forgoing essential practice and restricting opportunities for positive feedback. In the long term, the strategy is a losing one because it isolates the anxious individual from the benefits that socializing can bring, impeding learning socially effective behaviors, the lack of which forms a large of part of the subjective experience of shyness. It prevents the anxious individual from learning that the costs of social failure are much smaller and rarer than imagined. All of this can apply to the consequences for learning of withholding contributions in the classroom. The bias can readily become habitual in the absence of reinforcement of alternative ways of behaving.

I have concentrated here on the example of volunteering an answer in class. A decision model can also be applied to test taking, for example, the expressive vocabulary tests where shy children consistently obtain somewhat lower scores than their less shy peers. Pessimistic bias can result in lower test scores if potential answers are rejected or suppressed and can be costly if it is a timed test where hesitations impact upon scores. Does the child utter the response that first comes to mind or do they hesitate in order to weigh up the likelihood of it being the correct answer? Do they look to cues from the examiner? As Coplan and Evans (2009) suggest, shy students are risk aversive in such situations.

In principle, this model is testable by means of response time measures and video recording of mouth movements or, for older children, interviews about their performance. The hypothesis would be that there would be a significant interaction between shyness and the social context of testing. Crozier and Hostettler (2003)

obtained support for this, finding that the context of testing did affect shy and comparison-group participants differentially; such a design could be adapted to incorporate outcome variables over and above test scores. It is also possible that differences between shy and less shy respondents will be associated with item difficulty, where risk aversion may be more prominent in more challenging questions.

The model proposes a hypothetical process and does not assume that children consciously weigh up costs, benefits, and probabilities. Yet it is consistent with the fears that are expressed in questionnaires and interviews with older children and adult participants when they are questioned about factors influencing contributions to group conversations, where references to social costs and inhibition are prominent. Participants express fear of being laughed at or thought to be stupid or they fear being perceived as arrogant. They become self-conscious. To quote one 11-year-old, "I feel a lot more shy now than when I was younger … you're not really bothered about anything when you are younger, you don't really care if people are watching you, or what they might be thinking of you" (Crozier & Burnham, 1990, p. 183). Another example comes from literature: "She does not speak in class and on the rare occasions when she is required to answer a question or recite a poem her insides contract, and she is rigid with fear that she will say something foolish and shame herself" (Costello, 2014, p. 42).

The kinds of explanations that shy people construct about their behaviors help sustain the pessimistic bias proposed here. They also contribute to performance deficits by creating anxiety and associated rumination that can interfere with the cognitive resources necessary for answering questions. More generally, anxious self-preoccupation generates greater interference with retrieval from memory or task focus.

Shyness and Adaptation to School

There is consensus from empirical research that shyness is somewhat disadvantageous at school. Studies regularly identify statistically significant differences between shy children and their less shy peers on measures of attainment and on standardized tests of language development. Observational studies show that they participate less in class and that when they do so their utterances are shorter than are those of their classmates. There are also findings using a variety of measures that shy students are less well adjusted to school and that they are at greater risk of social anxiety in later life. In short, shy students give cause for concern. An additional worry is that the low profile that shy children tend to adopt in social situations can result in their difficulties going unnoticed in the school system.

There are limitations in the conclusions that can be drawn from the empirical research. These are aggregate data and much of the variance in outcome measures remains unexplained. There is also emphasis on the youngest children with few studies of high school students and a dearth of longitudinal research. Research is

ongoing into moderating and mediating factors and this promises to explain more of the variance in outcomes and provide insights into the processes involved.

In this chapter, I have aimed to provide a context for consideration of the reticence that characterizes shy students in the classroom and is frequently the principal basis for teachers concluding that a student is shy. Educational researchers, for example, Schultz (2009), argue that silence is an important ingredient in the life of the classroom and a quiet student is not necessarily at risk merely because he or she is reticent. Silence takes various forms and serves many functions, including acting as a form of communication; too readily, as Scollon (1995, p. 21) points out, "studies of communication have tended to look at silences as absence—as absence of sound and therefore as absence of communication". It is easy to neglect it as merely the background, assuming that the important action is elsewhere. Silence can communicate mental states and emotions and it plays various roles in classroom interaction. The researcher, like the class teacher, can ask several questions about it: Is there something about the specific circumstances that leads the student to behave in this way? What does acting in a shy way mean to the student? What functions are served in these circumstances for this student? Is the shy behavior being reinforced—or even constructed—by others including teachers and fellow students? In my outline model of the shy child facing the challenges of speaking up in class or taking a test, I have attempted to view the challenge from the student's perspective, assuming that silence does not mean that she is disengaged but that she is coping with a degree of conflict that she experiences in this specific context. Silence is a choice that the shy child and the academically unconfident student are making; it is their form of adaptation.

The analysis here has implications for teacher interventions. The teacher ought to create an environment that emphasizes acceptance, encouragement, and praise. The shy child needs to know that he can place trust in the teacher. Research into classroom climate supports this point. A well-structured classroom that has a positive, encouraging climate, assessed on the basis of standardized observational methods, and the degree of shy children's observed engagement in the classroom have both been shown to moderate the effect of shyness on academic attainment (Hughes & Coplan, 2018) and function as protective factors. Here, I suggest more specifically that teachers can be aware of three factors influencing the student's likelihood to contribute in class, namely, her confidence that she knows the answer, the strength of her fears about getting the answer wrong, and the threshold she prefers to adopt for choosing to contribute. Each of these constitutes a source of reticence that the teacher can target. Phrasing of questions should be clear in order to encourage confidence in understanding what the question means; negative reactions by the teacher, particularly public ones, should be avoided; praise should be given for having the courage to contribute; positive elements of the answer highlighted. The aim is not to have the shy child speak more but to give him or her confidence to do so when he or she wishes to; the goal is to reduce the factors that inhibit contribution.

Reticence and the anxieties that underlie it form only part of the difficulties that shy children face. The quality of peer relationships and the risk of loneliness are also important to take into account. These difficulties may not be restricted to school; nev-

ertheless, children spend much time there. The school setting is an important arena for research into social interactions with peers and we need more research with older students; the early years are critical for development but research should investigate which difficulties persist over time. We also have to take into account changes in shyness and the impact of children's growing awareness of social evaluation and the concerns this raises for them. Finally, research should investigate more closely the meanings that shyness has for students and teachers. A current project in Oslo, Norway, in which I am involved, draws upon both qualitative and quantitative designs to investigate these meanings and to analyze the circumstances in which teachers adopt particular strategies to encourage greater participation among shy, reticent students in the classroom (Mjelve, Nyborg, Edwards, & Crozier, 2019; Nyborg & Mjelve, 2017). Construing reticence in strategic terms is one approach, as is taking into account the student's appraisal of the costs and benefits of particular courses of action, but these deserve to be investigated in depth.

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