



Teachers' Use of Approval and Disapproval in the Classroom

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ABSTRACT *A review and analysis of the research literature on teachers' classroom use of approval/praise and disapproval/reprimand is provided in an attempt to determine the extent to which teachers typically employ praise in their classroom teaching. There is a considerable degree of agreement across the studies reviewed, carried out in the United States, Canada, the United Kingdom, Australia, New Zealand, Hong Kong and St Helena, regarding the ways in which teachers typically deploy approval and disapproval, with some interesting variations. There is little evidence to suggest that teachers, universally, systematically deploy contingent praise as positive reinforcement in spite of the considerable literature testifying to its effectiveness. In particular, praise for appropriate classroom social behaviour is only rarely observed.*

A considerable number of behavioural research and demonstration studies, carried out over the past 30 years, has consistently shown that teacher behaviour may be a powerful influence on the behaviour of both individual students and whole classes (see for example the classic studies by Becker *et al.*, 1967, and Madsen *et al.*, 1968). Although initially pioneered by behaviour analysts working in special education contexts, it has subsequently been clearly and unequivocally demonstrated, in a variety of educational contexts and settings, that such key teacher behaviours as contingent praise/approval and reprimand/disapproval may be systematically deployed by teachers so as to increase both academic and appropriate social behaviours and to decrease inappropriate behaviours (e.g. Merrett, 1981; Wheldall & Merrett, 1984, 1989; Merrett & Wheldall, 1987a, 1990; Wheldall and Glynn, 1989).

Consequently, it has become rather a truism to advise teachers experiencing troublesome or inappropriate classroom behaviour to employ contingent praise strategies in order to encourage more appropriate classroom behaviour (Merrett & Wheldall, 1990; Wheldall & Merrett, 1989). A common teacher response is the claim 'But we do that already'. But how far is this, in fact, the case? Do teachers really selectively employ contingent praise in order to reinforce desired classroom social behaviours? Or is praise,

when it is deployed, given in a non-contingent, unsystematic way? Do teachers even use more praise than reprimand? These are empirical questions and to which, the literature reveals, there may be empirical answers. The purpose of the present paper is to review critically classroom-based empirical research on teacher behaviour in an attempt to determine the *natural* or typical rates of approval/praise and disapproval/reprimand employed by teachers, and the extent to which teachers deploy approval/praise and disapproval/reprimand effectively.

As Schwieso and Hastings (1987) affirm, there is a relative paucity of purely descriptive, naturalistic studies on the ways in which teachers typically use praise/approval in the classroom. White (1975), in her seminal work on teacher approval and disapproval, suggested that 'little has been reported on rates of teacher verbal reinforcement as they actually occur in the classroom, that is, on what might be called *naturalistic* or *existing* rates' (p. 367). Consequently, this paper will review studies involving teachers teaching kindergarten classes to upper secondary classes in an attempt to canvass the full range of studies dealing with naturalistic observed use of teacher approval and disapproval.

Schwieso and Hastings (1987) acknowledge that 'it is a little obvious' to say that teaching is an interactive process but observe that it is a point often ignored in the research into the complexities of the classroom (p. 124). In their discussion of teachers' rates of approval and disapproval in the classroom they emphasise the importance of the relationship between teacher behaviour and student behaviour. 'Teachers' approvals and disapprovals may have some effect on pupils, but they are themselves in part the effects or consequences of pupils' actions: teachers do not approve or disapprove in vacuo' (p. 124). Or as Brophy (1981) puts it, '... much teacher praise is reactive to and under the control of student behavior rather than vice versa' (p. 5). A more balanced perspective, perhaps, may be that of Nafpaktitis *et al.* (1985) who state that in the feedback system of the classroom, 'students continually influence teacher behaviour and vice versa' (p. 366).

Early Studies Completed in the 1970s

In his 'functional analysis of teacher praise', Brophy (1981) reports findings from six separate studies he and Good carried out with various colleagues in the United States in the 1970s in the context of more general investigations into teacher-student interactions in the classroom. The Brophy-Good dyadic interactions coding system was employed in all of these studies which allows for the separate coding of teachers' responses to academic performance as against classroom conduct (Brophy, 1981, p. 8). The data overall indicated that teachers approved of students' behaviour more than they disapproved, and were most likely to praise 'good answers' or 'good work' than to criticise 'poor answers or poor work'. On the other hand, teachers were much more likely to criticise 'poor conduct' than to respond to 'good conduct', rarely praising students for appropriate behaviour. In all of the studies reported, praise for good conduct was the least frequent teacher response. Brophy's own summary of the data from these studies overall is that 'the typical teacher seldom praises good answers or good work and rarely praises good conduct' (Brophy, 1981, p. 10).

Seeking to determine the natural rates of teacher verbal approval and disapproval in classrooms, White (1975) reported the findings of 16 separate studies involving 104 teachers and their classes in the United States. Although some of the work of Brophy (1981) (and his colleagues) may have predated that of White, White's work is generally

considered as the first study to have as its primary focus natural rates of teacher approval and disapproval. Teachers in White's study were from a variety of schools teaching students from grades one to twelve.

White (1975) and her colleagues utilised an observation schedule known as TAD, an acronym for Teacher Approval and Disapproval Observation Record. Teacher approval was defined as 'a verbal praise or encouragement', and teacher disapproval as 'a verbal criticism, reproach, or a statement that the student's behaviour should change from what was unacceptable to acceptable to the teacher' (p. 368). (Note that both definitions require the response to be *verbal*.) A distinction was made between 'instructional' versus 'managerial' teacher responses in this study. To use other terminology, teacher responses were categorised according to whether they were in response to students' academic behaviour (instructional) or to their social (managerial) behaviour. Contrary to Brophy's (1981) overall finding that teachers showed more approval than disapproval, the findings of White's analysis were that, with the exception of those teaching children in grades one and two, teachers gave more disapproving than approving comments to their students overall.

White (1975) reports that the highest teacher approval rate in the studies was 1.3 verbal approval responses per observed minute, occurring in grade 2, with more relatively high rates occurring in the first and second grades (ranging from 0.27 to 1.3) (p. 369). After grade two, 'the rate declines sharply, where it seems to stabilise at about one teacher approval every 5 or 10 min. This means that in a typical class of 40 min, the teacher emits four to eight approvals during the entire class period' (White, 1975, p. 369). In terms of instructional or academic behaviour, teacher approval is *higher* than teacher disapproval in every grade. Conversely, for managerial or social behaviour, teacher disapproval exceeds approval, once again, in every grade (pp. 369–370). Moreover, White points to 'the almost nonexistent rate of teacher approval for managerial behaviour' (p. 370), with four of the 16 studies reported having a zero rate of approval statements to managerial behaviour in a total of 2,520 minutes (or 42 hours) of observation time (p. 369). Given the evidence for the efficacy of praise in reinforcing appropriate classroom social behaviour, this is a disturbing finding.

In summary, then, White (1975) found that students received more total teacher *disapproval* than approval over grade; for instructional behaviour alone, the rate of teacher approval was higher than the rate of teacher disapproval (particularly marked in the primary grades); and for managerial behaviour alone, teacher disapproval far outweighed teacher approval, the latter being 'almost nonexistent' (p. 370).

Similarly, in 1975, Heller and White investigated the effect of the ability level of the class on teachers' rates of verbal approval and disapproval. Five social studies teachers and five mathematics teachers from an inner-city junior high school were observed teaching both higher and lower ability classes. This study found that teachers 'emitted more disapprovals in lower ability classes than in the higher ability classes' (Heller & White, 1975, p. 796). Moreover, the higher rate of disapprovals directed at students in lower ability classes were predominantly 'managerial' in nature, addressing social (rather than academic) behaviours. Rates of approval, however, did not change across ability groupings, were almost exclusively directed toward academic behaviour, and exceeded the number of disapprovals of academic behaviour (p. 799).

In terms of subject taught there were differences evident between mathematics and social studies teachers, with disproportionate amounts of disapproval being found in social studies classes. In mathematics classes, on the other hand, the amount of disapprovals and approvals were roughly equal. As White (1975) had reported, Heller

and White (1975) also found that, in general, 'teachers almost never praised pupils for behaving well socially' (p. 796). An interesting anecdotal finding in this study is that of the 1,105 evaluative verbal responses (EVRs, the total of approving and disapproving statements) teachers made to students' behaviour, only one of these teacher responses was a managerial (or social) approval statement. On this one occasion, a teacher said 'Good' after a student indicated that he had brought a pen to class that day (Heller & White, 1975, p. 799). Clearly, teachers in this study did not praise students for behaving appropriately, or for following classroom procedures (p. 799).

Thomas *et al.* (1978) sought to compare their findings with the natural rates of approval and disapproval reported by White (1975) for grade seven teachers in her earlier study. They investigated the natural rates of teacher verbal approval and disapproval in ten grade seven classrooms in New Zealand. Their study did not, however, utilise the useful, if not critical, distinction between managerial (social) and instructional (academic) teacher responses, as White had done in her work. Moreover, observers only recorded as an approval response teachers' verbal responses that were contingent on the on-task behaviour of the student being observed (Thomas *et al.*, 1978, p. 92). Similarly, a disapproval response was recorded contingent upon off-task behaviour being observed. In other words, as a consequence of this method of classification, any non-contingent approval or disapproval received by students was not recorded. While one would consider it logically unlikely that students would be praised (or reprimanded) non-contingently, other research (reviewed later) has suggested that this can, indeed, be the case.

Despite differences in observation techniques employed (in addition to cultural and other differences between the samples), the results of the Thomas *et al.* (1978) study were broadly similar to those of White (1975). The majority of teachers displayed individual rates of disapproval that were higher than their individual approval rates. Moreover, seven of the 10 teachers had disapproval rates at least three times greater than their approval rates. It is interesting to note that the rates of disapproval per observed minute for seventh graders in each study were *exactly* the same at 0.58 (Thomas *et al.*, 1978, p. 93; White, 1975, p. 369). Approval rates per minute of observation in the Thomas *et al.* (1978) study were slightly lower at 0.20 (p. 93) than White reported for grade seven teachers at 0.34 (p. 369).

All of the studies discussed to date limited the definition of teacher approval and disapproval to *verbal* responses. In 1977, in Australia, Russell and Lin broadened 'positive teacher attention or response' to include non-verbal responses. In their study, approval responses were deemed to include 'contact, praise, facial attention, and academic recognition' (p. 151), with disapproval responses being defined as criticism, threats, facial attention, ignoring, holding the child, sending the child out of the room and punishment (p. 150). Ten selected students from one (only) grade seven class of 37 students were identified as belonging to the worst-behaved group (WB) and ten to the best-behaved group (BB).

This study found that the WB group received more teacher attention of any kind than the BB group. The teacher responded proportionately more to the inappropriate behaviour of the WB group, responding approximately 15% of the time to the behaviour of this group, and only 2% of the time to the inappropriate behaviour of the BB group (Russell & Lin, 1977, p. 153). This finding was predicted on the basis of the notion that teacher attention serves to maintain high rates of inappropriate classroom behaviour (p. 148). An unexpected finding of the study, however, was that the teacher also responded proportionately more to the *appropriate* behaviour of the WB group,

about 16% of the time, than to the appropriate behaviour of the BB group (3%) (p. 153). On the basis of this finding, the authors suggest that the high levels of appropriate behaviour of the BB group were not being maintained by teacher attention to this behaviour, and could have been maintained by factors other than teacher attention, some possibilities being intrinsic interest in their work or by satisfaction in achievement and mastery (p. 154). Caution should be exercised, however, in placing too much credence on explanations offered as a result of this study. Russell and Lin were relying on a sample of only one teacher and her class. Findings from such a small sample should clearly be viewed with tentative interest at best. The place that Russell and Lin occupy in the literature turns more on the fact that they appear to be the first to include non-verbal responses to the operational definition of teacher attention in the investigations of naturalistic rates of teacher approval and disapproval.

Later Studies Reported in the 1980s

In a similar vein, Fry (1983) observed teacher–pupil interactions in classrooms over a four-month period in order to examine similarities and differences in teacher–pupil interactions of ‘problem’ and ‘non-problem’ children. Owing to the nature of the observation schedule used, teacher approvals and disapprovals were not recorded as such. Rather, 15 teacher and pupil process measure variables were utilised covering eight teacher behaviours and seven pupil behaviours (Fry, 1983, p. 84). Teacher variables of interest in the present discussion include ‘positive affect’, operationally defined as teacher behaviours that show support or positive regard for students and their behaviour, including such behaviour as smiling, joking, reinforcement and praise, and ‘negative affect’, defined as verbal or non-verbal behaviours reflecting hostility or negative feelings of the teacher, including negative teacher evaluation of student behaviour, expressing anger or criticism (Fry, 1983, pp. 81–82).

Fry (1983) found that problem children received less positive affect from teachers, and received more negative affect from them, compared to their non-problem peers (p. 83). Moreover, problem children obtained fewer ‘social contacts’ from their teachers, received less ‘sustaining feedback’ and were asked less frequently by their teachers ‘to express their personal views and preferences on academic and class-related issues’ (p. 83).

Moreover, the differences evident between the problem and non-problem groups increased over the period of a school term (Fry, 1983, p. 86). Concomitant with the change in teacher behaviour, observations of problem children’s behavioural interactions ‘suggest an increase in serious misdemeanours and a corresponding decline in sustained attention’ (p. 79). It is reported that problem children’s serious misbehaviours increased from one instance per hour to almost 2.8 instances per hour by the end of the four-month period (p. 86). Clearly, while causality between teacher behaviour and student behaviour cannot be established, this study provides an interesting perspective on the impact of teachers’ social and affective orientation towards their students over time, particularly students who present as being behaviourally troublesome. Fry suggests that teachers need to be ‘more aware’ of their interactions with ‘problem children’, commenting that the results of the present study, ‘tentative as they are, suggest that problem children’s disruptive behaviours and decline in sustained attention may not necessarily reflect true problem behaviour. It is quite likely that they are mediated more often than we suspect by the prevailing attitudes and orientations of the teacher’ (p. 87). Clearly this is an empirical question.

Strain *et al.* (1983), in the United States, investigated children's compliance to teachers' requests, and the consequences for compliance. Nineteen teachers and 130 elementary schoolchildren from kindergarten to grade three were involved in this study of naturally occurring levels of teacher commands, and positive and negative teacher feedback. Students were selected on the basis of their social adjustment to school, being 'high-rated' (making a good adjustment to school) or 'low-rated' (not making a good social adjustment to school). In the low-rated group of 55 students, boys outnumbered girls by three to one. In the high-rated group of 75 students, girls outnumbered boys by a ratio of three to two. There was an approximately equal distribution of high- and low-rated students across the 19 classes in the study. As was the case in the Russell and Lin (1977) study, Strain *et al.* (1983) included gestures as teacher responses, as well as verbal behaviour.

Teacher behaviour was classified as: (a) teacher's commands, demands, requests; (b) teacher's positive social consequences; (c) teacher's negative feedback; or (d) teacher's repeated command, demand, request. Student behaviour was reported only as students' compliance (Strain *et al.*, 1983, pp. 246–247). For our purposes here, the findings for the classification 'teacher's positive social consequences' and 'teacher's negative feedback' are the most relevant. Strain *et al.* (1983) report that, given an episode of child compliance (by a member of either the low-rated or the high-rated group), 'the probability of positive social consequences (combining verbal and non-verbal behaviour) was .10. That is, 10 out of every 100 episodes of compliance was [*sic*] followed by positive feedback from the teacher' (p. 246). In addition to these low levels of approval, the differential treatment of the two groups is of particular interest. The vast majority (82%) of low-rated children *never* received any positive social consequences for compliance, compared with only 27% of high-rated children (pp. 246–247). In terms of teachers' negative feedback, the probability that teachers would respond was 0.14 for the low-rated group, and 0.10 for the high-rated group, although this difference was not statistically significant. Overall, the general level of feedback, including both positive and negative responses, was considered low.

In addition to corroborating and expanding on previous studies, such as White (1975) and Thomas *et al.* (1978), which found that teachers are generally inclined to provide more negative feedback (disapproval) than positive feedback (approval) to students, Strain *et al.* (1983) report another important finding. Teachers in this study demonstrated that 'a good proportion of positive feedback provided may be contingent on non-compliance' (p. 248). In fact, misplaced positive contingencies occurred almost as often as appropriately delivered consequences. As Strain *et al.* conclude, it would appear that the group of children 'most in need of systematic feedback (low-rated group) were exposed regularly to contingency arrangements counterproductive to compliance' (p. 248).

These findings, considered with the findings of Russell and Lin (1977) and Fry (1983) described above, suggest that teachers, at best, are not taking advantage of opportunities to reinforce appropriate behaviour in any overt, systematic way. At worst, they could be reinforcing the inappropriate behaviours of their students. It would appear from these three studies that the students most affected by this style of behaviour management (or mismanagement) are the group of students who most desperately need classroom behaviour management to be effective.

With the exception of the studies reported by Brophy (1981), all other studies reported so far have found that, overall, teachers disapprove of student behaviour more than they approve of it. Findings from a study by Nafpaktitis *et al.* (1985) carried out

in 84 classrooms in 29 intermediate schools in Los Angeles, however, changed this trend of reported results. The purpose of the study was to investigate the 'naturally occurring rates of verbal and non-verbal teacher approval of appropriate student behavior, approval of inappropriate student behavior, and teacher disapproval as they relate to student behavior' (p. 363). The distinction between appropriate approval and inappropriate approval was as follows: appropriate approval was defined as approval following student on-task behaviour and inappropriate approval as following student off-task behaviour.

As indicated above, and in contrast to most previous studies, Nafpaktitis *et al.* (1985) found that teachers provided students with more appropriate approval responses than disapproval responses. For most classes in the study, higher rates of student on-task behaviour were associated with higher rates of approval and lower rates of disapproval (p. 365). Approval responses were observed as occurring at the mean rate of 1.3 per minute, although 0.40 of these were classified as "inappropriate approval", leaving a mean rate of 0.90 appropriate approval responses per observed minute. (This finding confirms Strain *et al.*'s (1985) concern with inappropriately delivered consequences described above.) Disapproving responses were occurring at a mean rate of 0.29 per minute observed (p. 365).

In this study, the amount of disruptive and off-task behaviour was 'clearly related to the teacher's use of approval and disapproval' (Nafpaktitis *et al.*, 1985, p. 365). Teacher disapproval scores were positively correlated with off-task behaviour (0.54). Note that Thomas *et al.* (1978) had similarly found a negative correlation (-0.48) for teacher disapproval and student on-task behaviour (p. 94). In the current study, the correlation between off-task behaviour and appropriate approval was -0.21 (Nafpaktitis *et al.*, 1985, p. 364). Thomas *et al.* (1978) found a correlation of 0.40 for teacher approval and student on-task behaviour (p. 94). These figures confirm, in effect, those of Thomas *et al.*, that 'the disapproval correlation with student on- or off-task behavior was higher than the approval correlation' (Nafpaktitis *et al.*, 1985, p. 365).

The effect of inappropriate approval, a phenomenon that Nafpaktitis *et al.* (1985) consider may occur frequently in the 'typical classroom' by way of teachers unintentionally reacting to 'inappropriate student behaviors with their attention and even approval' (p. 362), was also considered in this study. The correlation between off-task behaviour and inappropriate approval from the teacher was found to be 0.40. One of the largest positive correlations found in the study was that between inappropriate approval and disruptive student behaviour (0.52), higher rates of approval of off-task behaviour being associated with higher rates of disruptive behaviour (pp. 364–365). Moreover, in general, the higher the inappropriate approval, the lower the student on-task behaviour (p. 365).

While being cautious about the conclusions that can be drawn about cause and effect from a correlational, non-experimental study, Nafpaktitis *et al.* (1985) suggest that the attention provided by disapprovals reinforces inappropriate behaviour that it follows, given that a positive significant correlation exists between the rate of disapproval and the rate of off-task behaviour in this study (p. 365). Moreover, inappropriate approvals 'may also have a devastating effect on classroom management if responding to disruptive behaviours such as talking out or being out of one's seat reinforces these behaviors' (p. 365). They go on to say that 'some students ... may find it reinforcing to irritate teachers (resulting in disapproval) and may respond to inappropriate approval in the same way as they do to appropriate approval (ie. with an increase in approved behavior)' (pp. 365–366).

In terms of the trend of findings reported so far, with the exception of Brophy (1981), it would seem prudent to heed Nafpaktitis *et al.*'s (1985) caution that it may be 'premature' to conclude that the findings of the previous studies (such as White, 1975; Heller & White, 1975) reflect the norm in terms of teachers' use of approval and disapproval. In light of the work reported from the mid-1980s on, this advice would appear to be well founded.

In Brophy's (1981) functional analysis of teacher praise, referred to earlier, he makes the distinction, both for 'praise' and 'criticism', between simple feedback statements and teacher reactions that go beyond 'mere affirmation of correctness of response' (p. 6). As Schweiso and Hastings (1987) point out, this distinction is particularly important for Brophy since he argues that feedback is virtually never harmful whereas praise may be (p. 116). Moreover, they believe this distinction may, in part, be responsible for the depressed rates of both praise and criticism found in the studies he reports compared with those found in White (1975) and Heller and White (1975), for example (Schweiso & Hastings, 1987, p. 118). Brophy considers that praise may be defined as having the same meaning and connotations as it does in everyday language: 'to commend the worth of or to express approval or admiration' (p. 5). Brophy (1981) also distinguishes praise and criticism from more global approaches such as 'warmth' or 'hostility' (p. 6).

While Schwieso and Hastings (1987) acknowledge that Brophy's (1981) distinction between feedback and praise makes conceptual sense, they also concede that, in practice, it 'may be difficult to decide, when, for instance, a teacher says "Correct!", whether it includes an evaluative component or is pure feedback' (p. 116). Accordingly, they argue that observation systems which employ categories such as 'approval', 'positive approval' or 'positive feedback' minimise the practical difficulties of classifying a response as an evaluative comment (for example, communicating approval) or purely as a feedback statement. Such observation schedules then include within them all those teacher actions, 'which, on the face of it, seem to include some degree of evaluation' (p. 116).

Merrett and Wheldall (1986) developed such an observation system known as OPTIC (Observing Pupils and Teachers in Classrooms). Teacher approvals, which Merrett and Wheldall term 'positive events', and teacher disapprovals, correspondingly called 'negative events', include both verbal and non-verbal manifestations of approval and disapproval. Given that the remaining studies to be reported have all utilised the OPTIC schedule, some details of the schedule's characteristics are included. OPTIC allows the observer to look systematically at two main aspects of classroom behaviour, namely teacher behaviour and student behaviour, specifically on-task behaviour (Merrett & Wheldall, 1987b, p. 97). In Section A of the schedule, the observer is concerned with positive and negative teacher responses to students' academic and social behaviours. For the purposes of this schedule, instructional language is ignored. Section B is concerned with estimating students' on-task behaviour. Observers alternate between Section A and Section B at three-minute intervals, each observation session lasting a total of 30 minutes. Typically, a class is observed on at least three separate occasions (Merrett & Wheldall, 1986). The instrument has been shown to be both reliable and valid, with interobserver agreement figures for both sections of the schedule averaging over 90% (Merrett & Wheldall, 1986; Merrett & Wheldall, 1987b).

Employing the OPTIC schedule, Merrett and Wheldall (1987b) reported the natural rates of teacher approval and disapproval found in British primary and middle school classrooms. Their sample consisted of 128 primary and middle school teachers and

their respective classes. Merrett and Wheldall found that, overall, teachers responded with more approval than disapproval. This finding confirmed the earlier finding of Nafpaktitis *et al.* (1985). Expressed as a percentage of the total responses to student behaviour, total approval to academic and social behaviours (56%) was slightly higher than total disapproval to these behaviours (44%) (p. 97). Expressed as a mean rate per minute, total approval occurred at the rate of 1.15 (p. 98), which was similar to the rate reported by Nafpaktitis *et al.* of 1.3 per minute, reported earlier. Total disapproval occurred at a rate of 0.93 (p. 98), a somewhat higher figure than that found by Nafpaktitis *et al.* (0.29), and that found by Thomas *et al.* (1978) for seventh graders in New Zealand (0.58), also reported earlier.

Although overall rates of approval were higher than disapproval in the Merrett and Wheldall (1987b) study, a high proportion of this teacher approval was in response to students' academic behaviour. For academic behaviour *alone*, positive responses were three times as frequent as negative responses (p. 97). On the other hand, negative responses to social behaviour were five times as frequent as positive responses (p. 97). The findings from this study demonstrate that while teachers are very adept at recognising and rewarding appropriate *academic* behaviour, the same cannot be said about their ability to recognise and reward appropriate *social* behaviour. Consequently, while approval for academic behaviour is much higher than disapproval, for social behaviour the reverse is the case. Merrett and Wheldall (1987b) argue that teachers are 'very quick to notice social behaviour of which they disapprove and continually nag children about it ... But they hardly ever approve of desirable social behaviour ... In other words, children are expected to behave well and are continually reprimanded if they do not' (p. 100).

Merrett and Wheldall's (1987b) findings in relation to teacher responses to social behaviour are broadly supported by the earlier findings of Galton *et al.* (1980). In their more general 'ORACLE' study of interaction in 58 top junior classrooms in Britain, Galton *et al.* employed a schedule which included the recording of teacher statements that praised pupil's work or effort and statements that provided neutral or critical feedback on work or effort. For the purposes of analysis, disapprovals were combined with neutral feedback when considering academic matters whereas for matters of conduct, approvals were combined with neutral statements. This makes direct comparison with the studies using OPTIC (or similar more specific schedules used by other researchers) problematic but some points of agreement are, nevertheless, evident. Their data revealed that statements relating to classroom behaviour (critical control) were twice as frequent as praise statements relating to work. The most frequent type of teacher utterance recorded was 'neutral or critical feedback on work or effort', accounting for approximately 22% of all teacher statements recorded. On average, students received ten times as much criticism for social behaviour as praise for good work.

Following up their work on natural rates of teacher approval and disapproval in primary and middle schools, Wheldall *et al.* (1989) subsequently extended their work to British secondary school classrooms. A sample of 130 secondary school teachers and their classes was observed, the OPTIC schedule being employed once again. Students in the classes ranged in age from 11 to 16 years. In line with the findings from the earlier study, Wheldall *et al.* (1989) found that teachers used more approval (55% of the total responses) than disapproval overall, a figure almost exactly the same as for the primary/middle school study (56%) reported above. Once again, 'most of the approval was directed at academic pupil behaviours, whereas most of the disapproval was for inappropriate social behaviour' (p. 38). For academic behaviour alone, positive re-

sponses were three times as frequent as negative responses, the exact opposite being the case for responses to social behaviour (i.e. three times as many negative responses as positive responses) (p. 42). The total approval rate expressed as a mean per observed minute was 0.65 (p. 42), substantially lower than the rate in the primary/middle school study (1.15). The total disapproval rate 0.53 (p. 42) was again considerably lower than in the primary sample.

Wheldall *et al.*'s findings in a British context are broadly in line with those of the Rutter *et al.* (1979) '15,000 hours' study which involved observation carried out in 12 British secondary schools in the same Inner London Education Authority with the aim of 'collecting fairly simple descriptive data about lessons'. A broadly based observation schedule was developed by the researchers enabling data to be collected on both teacher and pupil activities. The schedule comprised five-minute sessions, which focused on teacher interactions with pupils, and observers recorded whether any examples of praise or punishment and marked expressions of warmth and negative feelings were given. As with the ORACLE study referred to earlier, direct comparisons with the more specific studies reviewed in this paper are difficult since less precise observational definitions and categories of key teacher behaviours were employed. Rates of teacher approval and disapproval appeared to show that frequent disciplinary interventions in the classroom were associated with more inappropriate behaviour. Furthermore, teacher responses, which resulted in innumerable interruptions to the flow of the lesson and which involved constant checking and reprimanding, appeared to perpetuate any behaviour disturbance. The absolute rates of teacher praise to pupils' work were very low, usually only three or four instances per lesson.

When data are analysed according to age of class taught, Wheldall *et al.* (1989) confirm White's (1975) findings that as students increase in age, teacher approval decreases accordingly. Although, in agreement with White on this point, these findings conflict (as do the findings from the primary/middle school study) with the earlier work of Heller and White (1975) and Thomas *et al.* (1978) 'who found teachers in grades 7 and 9 more disapproving than approving' (Wheldall *et al.*, 1989, p. 45). The data are in line, however, with the findings of Nafpaktitis *et al.* (1985) in respect of teachers being, overall, more approving than disapproving of their students. Also like Nafpaktitis *et al.*, (1985), Wheldall *et al.* (1989) report interesting correlational data. Highly significant positive correlations ($p < 0.001$) were found between on-task behaviour and both approval to academic behaviour (0.44) and approval to social behaviour (0.37). A similarly significant negative correlation existed between teacher disapproval to social behaviour and on-task behaviour (-0.32).

The Most Recent Studies Conducted in the 1990s

Further investigations into the natural rates of teacher approval and disapproval using OPTIC were carried out by Winter (1990) in secondary school classes in Hong Kong. Eighty-six teachers and their classes were observed on one occasion only, providing data that confirm many of the findings of the Wheldall *et al.* (1989) secondary school study. Winter found teacher approval overall (63%) exceeded teacher disapproval, with approval to academic behaviour accounting for the vast majority of approval responses (50%). A strong positive correlation was found between total teacher approval and on-task behaviour (0.40), which was a very similar finding to that observed in the Wheldall *et al.* (1989) study. In addition, a strong negative correlation existed between disapproval and on-task behaviour (-0.40), which was again similar to the finding

from the British study reported above (Winter, 1990, p. 91). Although, these findings confirm the findings of Wheldall et al. (1989) a degree of caution should be exercised given that the data are based on one observation only per teacher, not the minimum of three as recommended when using OPTIC (Merrett & Wheldall, 1986).

In similar vein, Wheldall and Beaman (1994) collected OPTIC data on samples of Australian teachers and their classes in the Sydney metropolitan area. The primary sample comprised 36 teachers and classes from seven different schools. More than 80% of this group were female teachers, and most of the teachers (51.5%) were aged between 30 and 39. The main findings from this observational study can be summarised as follows. Overall, teachers used an equal number of (*total*) positive and negative responses to student behaviour (50%). Similarly, the total number of responses to academic (48%) and to social behaviour (52%) was almost the same. Positive teacher responses to *academic* behaviour (38%) occurred at a rate nearly four times higher than negative responses (10%). For teacher responses to *social* behaviour, however, the rate of negative responses (40%) was over three times greater than that for positive responses (12%). The findings from this observational study in terms of *ratios* of responding concur with the results from the British sample of 128 primary teachers and their classes of Merrett and Wheldall (1987b). Differences are apparent, however, in the *rates* of responding. This group of Australian primary teachers had a total approval rate of 0.61 responses per minute, only half that of their British peers (1.15) whereas their total disapproval rate, 0.62 responses per minute, was only two thirds that of the UK teachers (0.93). In essence, then, the Australian primary teachers simply responded less overall but the resulting positive to negative ratio is very similar.

A total of 79 secondary teachers and their classes from four metropolitan high schools in Sydney were also observed in Wheldall and Beaman's (1994) study. Of those indicating their age, 54% were in the 30–39 year age group. Overall secondary teachers used slightly more *positive* (53%) than negative responses (47%) to student behaviour. Similarly, slightly more responses to *academic* behaviour (52%) were used than to social behaviour (48%). For responses to *academic* behaviour, the rate of *positive* responses (46%) was nearly eight times greater than that for negative responses (6%). Conversely, for *social* behaviour, the rate of *negative* responses (42%) was nearly six times greater than positive responses (7%). The findings from this study are again consonant with the results obtained from the sample of British secondary teachers as reported by Wheldall et al. (1989). But again, while the ratios are similar there are differences in the rates of responding. Australian high school teachers approved overall at a rate of 0.45 responses per minute compared with 0.65 for their British high school peers while their overall negative responses averaged a rate of 0.40 responses per minute compared with 0.53 for the British sample, both rates being appreciably lower.

The most recent work in this area, again using the OPTIC schedule, is reported by Charlton et al. (1995). Observations were undertaken in 15 classes on the isolated Atlantic island of St Helena. Students in the study ranged in age from seven years to ten years, being drawn from three 'first' and three 'middle' schools. Five classroom observations were obtained for each teacher and class. Findings from St Helena classrooms showed that, overall, teachers distributed more approval than disapproval responses to their students' behaviour (Charlton et al., 1995, p. 822). Clearly, this finding replicates those found by Nafpaktitis et al. (1985), Merrett and Wheldall (1987a, b), Wheldall et al. (1989) and Winter (1990). The mean rate per minute for total approval was 1.61 and 1.41 in first and middle schools, respectively, with the mean rate for total disapproval being 0.50 and 0.89 for first and middle schools,

respectively (p. 821). The approval rates reported here are higher than for any other study reported in this review.

A major difference in findings, however, does appear. In the case of first schools, more teacher responses were made to social (57.4%) behaviours than to academic behaviours (42.6%). In no other study has this been the case. In fact, three times as many approval as disapproval responses were made by first school teachers to *both* academic and social behaviours. In the middle schools group marginally more responses were made to academic (51.6%) than to social behaviours (48.4%), being more in line with trends in other studies. The rate of approval to social behaviour is still high relative to other findings. Moreover, in this study, first and middle school student academic and social behaviours *both* attracted more approval responses from teachers than disapproval responses.

The authors of the study posit a number of possible explanations as to why classrooms in St Helena are so approving, ranging from geographical isolation, cultural differences in interactions, the absence of television, to the teachers on the island 'getting it right' in terms of classroom behaviour management (Charlton *et al.*, 1995, p. 824). High levels of on-task behaviour reported in this study (96% for first and 92% for middle schools), together with mode of teacher responses suggest that the classrooms of St Helena could be exemplars of effective classroom behaviour management.

Concluding Comments

Tables I–III provide summaries of the main studies on teachers' use of approval/praise and disapproval/reprimand as discussed in the three major sections of this review. Over the past 25 years, researchers have attempted to establish the rates of naturally occurring teacher responses to student behaviour. As may be seen from this summary of the literature, reports of teacher behaviour indicate variable findings, although certain trends are evident.

Earlier studies typically found that teachers were more disapproving than approving of their students' behaviour overall. If the studies included in Brophy's (1981) functional analysis are taken into account, however, the picture is equivocal. One thing that is constant in the literature, with the exception of the Charlton *et al.* (1995) study, however, is the fact that the *academic* behaviour of students is much more likely to attract teacher praise or approval than is *social* behaviour. Approval for appropriate social behaviour does not attract teacher attention at any appreciable rate, other than in St Helena. Rather, it is the inappropriate behaviour of students that forces teachers to pay attention. It has been suggested by some that students' inappropriate behaviour is being maintained or even increased by inappropriate or non-contingent teacher attention.

Since the mid-1980s, however, there appears to have been a change in the pattern of teacher responding, with teachers using more approval responses than disapproval responses overall. This is not to say that teacher behaviour has changed substantively as a result of an event or events occurring in that time period, although one cannot exclude such a possibility. The change in trend could be attributable to factors such as changes or differences in the operational definitions for teacher approval or disapproval, for instance, including gestures as well as verbal responses in definitions of teacher approval or disapproval.

Despite the apparent change in teachers' behaviour (from being more disapproving to being more approving overall), the fact remains that teachers, again with the

TABLE I. Summary of studies on teachers' use of approval and disapproval in the 1970s

Author/s	Year/Place	Subjects	Main findings
White	1975 USA	104 Teachers Students in Grades 1-12	More verbal disapproval than verbal approval overall, after Grade 2.
Heller & White	1975 USA	10 Teachers (5 Mathematics) (5 Social Studies) Students in Grades 7-9	Teachers' use more verbal disapproval in lower ability classes than in higher ability classes.
Thomas, Presland, Grant & Glynn	1978 New Zealand	10 Teachers 10 Grade 7 classes	Majority of teachers had higher individual verbal disapproval rates than individual verbal approval rates.
Russell & Lin	1977 South Australia	1 Grade 7 Teacher 20 target students 10 WB (Worst Behaved) 10 BB (Best Behaved)	Teacher responded at a higher rate to the inappropriate behaviour of the WB group than the BB group.
Brophy	1981 USA	Reports the results of six studies between 1973 and 1980 from Grades 1-8.	Teachers overall showed more approval than disapproval; were more likely to approve of academic behaviour than disapprove of it; were more likely to disapprove of academic behaviour than to approve social behaviour.

exception of the St Helena teachers in the most recent study reviewed (Charlton *et al.*, 1995), respond far more frequently to the inappropriate social behaviour of their students than to the appropriate behaviours they may wish to see increased. Positive correlations between teacher approval and on-task behaviour, and concomitant negative correlations between teacher disapproval and on-task behaviour, suggest that teachers' less than optimal use of approval and disapproval could be responsible for discouraging appropriate behaviour, particularly appropriate social behaviour in the classroom. In spite of the considerable body of evidence testifying to the fact that teacher-manipulated rates of approval and disapproval can change the behavioural characteristics of the classroom, it would appear that many teachers fail to take full advantage of this potentially powerful behaviour management tool.

While not strictly within the scope of the present review, it should perhaps be added in conclusion that appropriate skills-based training of teachers in the effective deployment of praise and reprimands has been shown to be highly effective. For example, Wheldall and Merrett (with associated students and colleagues) have demonstrated the efficacy of the Positive Teaching Package and its predecessors, in a series of studies (see Merrett & Wheldall, 1990; Wheldall & Glynn, 1989; Wheldall & Merrett, 1989.

TABLE II. Summary of studies on teachers' use of approval and disapproval in the 1980s

Author/s	Year/Place	Subjects	Main Findings
Fry	1983 Canada	28 Teachers and 400 students at elementary school level Subjects selected on the basis of being a problem/non-problem student	'Problem' children received less positive affect and more negative affect from their teachers than their non-problem peers. A deterioration in interactions with the teacher over time was evident, as were increased serious misdemeanours with a corresponding decline in attention.
Strain, Lambert, Kerr, Stagg & Lenkner	1983 USA	19 Teachers and 130 children in kindergarten to Grade 3 Subjects classed according to making good (poor) social adjustments to school	Found low levels of feedback, both positive and negative. Found teachers used more disapproval than approval overall. Found a good proportion of positive feedback was contingent on non-compliance.
Nafpaktitis, Mayer & Butterworth	1985 USA	84 Teachers in their classes in intermediate school	Mean rates of teacher approval were found to exceed rates of disapproval, in contrast to previous studies. Teacher disapproval scores were positively correlated with off-task behaviour.
Merrett & Wheldall	1987 UK	128 Primary and middle school teachers and their classes	Teachers used more approval (56%) than disapproval (44%) overall. For academic behaviour, positive responses were three times as frequent as negative responses. For social behaviour, negative responses were five times as frequent as positive responses.
Wheldall, Houghton & Merrett	1989 UK	130 Secondary school teachers and their classes	Teachers used more approval (55%) than disapproval overall. For academic behaviour positive responses were three times as frequent as negative responses. For social behaviour, the opposite was the case.

TABLE III. Summary of studies on teachers' use of approval and disapproval in the 1990s

Authors	Year Place	Subjects	Main findings
Winter	1990 Hong Kong	86 Secondary teachers and their classes	Teachers approved (63%) more than they disapproved overall. More approval to academic behaviour than to social behaviour.
Wheldall & Beaman	1994 Australia	36 Primary teachers and their classes	Teachers used equal amounts of approval and disapproval (50%). For academic behaviour positive responses were four times as frequent as negative responses. For social behaviour, negative responses were three times as frequent as positive responses.
Wheldall & Beaman	1994 Australia	79 Secondary teachers and their classes	Teachers used slightly more approval than disapproval (53%). For academic behaviour positive responses were eight times as frequent as negative responses. For social behaviour, negative responses were six times as frequent as positive responses.
Charlton, Lovemore, Essex & Crowie	1995 St. Helena	15 Teachers and their classes in six first and middle schools	Teacher distributed more approval than disapproval. Academic and social behaviours <i>both</i> received more approval than disapproval.

Acknowledgements

We would like to thank Coral Kemp and Margaret Clayton for their helpful comments on earlier drafts of this paper.

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