



Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students

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Objectives. Self-critical people, compared with those who self-reassure, are at increased risk of psychopathology. However, there has been little work on the different forms and functions of these self-experiences. This study developed two self-report scales to measure forms and functions of self-criticism and self-reassurance and explore their relationship to depression.

Methods. A self-report scale measuring forms of self-criticism and self-reassuring, and a scale measuring possible functions of self-criticism, together with a measure of depression and another self-criticism scale (LOSC), were given to 246 female students.

Results. Self-criticizing vs. self-reassuring separated into two components. Forms of self-criticizing separated into two components related to: being self-critical, dwelling on mistakes and sense of inadequacy; and a second component of wanting to hurt the self and feeling self-disgust/hate. The reasons/functions for self-criticism separated into two components. One was related to desires to try to self-improve (called self-improving/correction), and the other to take revenge on, harm or hurt the self for failures (called self-harming/persecuting). Mediation analysis suggested that wanting to harm the self may be particularly pathogenic and is positively mediated by the effects of hating the self and negatively mediated by being able to self-reassure and focus on one's positives.

Conclusions. Self-criticism is not a single process but has different forms, functions, and underpinning emotions. This indicates a need for more detailed research into the variations of self-criticism and the mechanisms for developing self-reassurance.

Billy Connolly, the famous Glaswegian comedian, suffered various forms of early abuse and has struggled with depression and an alcohol problem (Stephenson, 2001). During an interview with Tim Adams (Adams, 2001), Connolly recalls an important insight he

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had whilst trying to relax in a flotation tank. He became aware of a kind of voice that is there when he makes plans to do things. The inner voice says: '*No, you'll never do that. No, you're not good enough, not clever enough, you'll never go there*' (p. 9, italics in original). Connolly relates 'this voice' to the many who have beat and shamed him. However, Adams (2001) says of Connolly, 'he jokes about it now but he believes, too, that the voice will never really leave him; he sees his life as a series of different strategies for learning to live with it. Not least of these was the tried-and-tested one he employed in the tank itself: "Away with you!" he yelled, "F . . . off"' (p. 9).

Many theorists have viewed self-devaluation, self-condemnation, and self-critical/attacking feelings and cognitions as important components of psychopathology. Indeed, for many centuries, depression has been linked to feelings of worthlessness and self-devaluation (Radden, 2000). Freud (1917) formalized this experience by suggesting that depression-linked self-devaluation and criticism arise from superego attacks on the ego and efforts to protect a needed person from anger. In cognitive therapy, negative, self-focused automatic thoughts have been seen as evaluative, condemning, and blaming, and closely linked to depression (Beck, Rush, Shaw, & Emery, 1979). Other therapists have suggested that self-criticism constitutes a specific vulnerability (different from dependency) to depression (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Blatt & Zuroff, 1992). Kohut (1971, 1977) argued that as a result of early experiences, people could internalize an ability to be self-reassuring and soothing in times of personal failure, or to act out their frustration with narcissistic rage at the self.

Zuroff, Koestner, and Powers (1994) found that the degree of self-criticism in childhood is a predictor of later adjustment. Zuroff, Moskowitz, and Cote (1999) found that self-criticism is associated with depression and poor interpersonal relationships. A study by Hartlage, Arduino, and Alloy (1998) suggests that self-criticism may be a trait marker for depression. In a large study ($n = 489$), Murphy *et al.* (2002) found that self-disparagement, marked by feelings of personal inadequacy, is strongly associated with life-time risk of depression. Teasdale and Cox (2001) found that with a lowering of mood, recovered depressed people become more self-critical than never depressed people. Gilbert *et al.* (2001) found that for both self-critical thoughts in depression and malevolent voices in schizophrenia, the degree to which individuals experienced these 'internal attacks and put-downs' as powerful and dominating was significantly associated with depression. In a study by Mongrain, Vettese, Shuster, and Kendal (1998), self-criticism was associated with feelings of being subordinate and inferior and poor affiliative relationships with others. Gilbert (1992, in press), suggested that self-critical thoughts and feelings can be seen as forms of 'inner harassment' that are stressful. Rector, Bagby, Segal, Joffe, and Levitt (2000) found that self-critics tended to have a poorer outcome with cognitive therapy than dependent people, but the extent to which one could modify self-criticism affected outcome.

It is interesting that Billy Connolly refers to his own self-criticism as being like 'an inner voice', and indeed we believe this is not an uncommon experience for some people. Such experiences of self-criticism raise the proposition that there must be a part of the self that 'does' the criticism and another part that 'responds' to it, i.e. an interaction between different aspects of the self (Gilbert, 2000a; Gilbert *et al.*, 2001). Gestalt therapists have referred to this as topdog-underdog (Greenberg, 1979). Evolutionary psychopathologists have suggested three important propositions that may illuminate such a relationship (Gilbert, 1989, 1992). First, humans have evolved specific competencies to be able to learn, understand and enact social roles (e.g. for attachment, friend-enemy, dominant-subordinate, or sexual roles). Second, these competencies

operate through specialized brain systems and can be affected by specific hormones and neurotransmitters (Panskepp, 1998). Third, the role-forming competencies that evolved for coordinating social roles with external others can be recruited for self-evaluations and can play off against each other (Gilbert, 2000a). Hence, for example, competencies and behaviours for the hostile dominating of others (associated with vigilance to subordinate violations, derogating others, and issuing threats), and those for acting as a threatened subordinate (fearful compliance, appeasement, submission, and escape) can interact at the subjective (self-to-self) level (Gilbert, 2000a, 2000b; Gilbert *et al.*, 2001). A related proposition, derived from interpersonal and cognitive theory, has been posited by Baldwin and his colleagues (e.g. Baldwin & Fergusson, 2001). They have shown that self-evaluations and feelings are derived from internalized interpersonal or relational schema.

There is clinical evidence that a dominant-subordinate self-to-self relationship can indeed be acted out internally (e.g. with one part of the self issuing threats and shaming put-downs while another part of the self submits and feels beaten down). For example, using the Gestalt technique of the two chairs (Greenberg, Elliott, & Foerster, 1990; Greenberg, Rice, & Elliott, 1993), depressed people can be asked to role-play their critical thoughts by expressing them from one chair, and then to switch chairs and explore their feelings and self-beliefs to these 'attacks'. After delivering an attack on him/herself, the depressed person often responds by agreeing with (submitting to) the substance of an attack (e.g. 'Yes it is true, I am an inadequate, worthless person') and quite commonly will take up submissive postures in the feeling chair. In a fascinating study of responses to self-criticism, Whelton (2000) measured students' levels of self-criticism with the Depressive Experiences Questionnaire (DEQ). He then asked each student to sit in one chair and spend 5 minutes imagining him/herself in the other chair, criticizing themselves. They were then invited to switch chairs and respond to the self-criticism. Those high in self-criticism often 'submitted' to their own self-criticisms, expressed shamed and sad faces, and felt weak and unable to counteract their attacks. In other words, some people appear to feel beaten down and have to submit to their own self-criticism and shaming attacks. Indeed, Greenberg *et al.* (1990) suggested that it is the inability to defend oneself against one's own self-attacks that results in depression.

Despite the important role that self-criticism, self-condemnation, and self-denigration play in many forms of psychopathology, and their prominence in many theories, they tend to be treated as a single process that varies in terms of degree or severity. However, Driscoll (1989) argued that self-condemnation has different functions, e.g. to self-correct, to guard against future errors and maintain standards, or to elicit sympathy. Gilbert (1997) suggested that self-blaming and self-criticisms could arise from efforts to try to improve oneself and prevent errors, out of frustration (a lashing out at self), or from self-hatred. Billy Connolly's example of self-devaluation, that operated when he thought of trying new things, suggests yet a different form, of preventing self from taking risks and keeping one in a subordinate position (Gilbert, 2002).

Gilbert (2000a, 2000b) suggested that the forms and functions of self-attacking may mirror (and be adapted from) evolved competencies that regulate external relationships. For example, dominant animals attack and threaten subordinates to coerce them to behave in certain ways; that is, to be compliant. In animals, attacks are designed to stress subordinates and keep them in a 'subordinate frame of mind' (Gilbert & McGuire, 1998). Parents may threaten their children and punish them for mistakes or 'not trying hard enough'. They may threaten the child by pointing to losses, e.g. 'If you don't do

“X” or succeed at “Y” no one will like you; you won’t get on in the world’. Here, threats and attacks are used to regulate the behaviour of the child (entice compliance), but a parent may claim that this is for their (the child’s) own good (Bowlby, 1980). People who internalize this form of self-regulation (dominant-subordinate) may say that self-attacking and punishment are aimed at correcting behaviour (‘I am self-critical to stop me making mistakes’ or ‘for my own good’), as a parent might say to a child. It is to prevent bad things happening, by being obedient.

However, humans and animals can launch quite savage attacks on each other for reasons other than the coercion of subordinates. This kind of attacking in interpersonal relationships is more typical between ‘enemies’ or directed at the stigmatized where there is active dislike or hatred. The evolution of this style of relating may have more to do with persecuting out-groups and those seen as harmful to the self or group. Consider, for example, forms of group persecution, racism, or ethnic cleansing, where the aim seems to be active destruction of the other and their removal from the body of the group. Here, submissive and appeasement behaviour may not work to deflect attacks. The aim of the attacker is to purify and cleanse that seen as ‘bad/contaminating’ by distancing, excluding and/or destroying it (Shweder, Much, Mahapatra, & Park, 1997). Moreover, the motives and beliefs involved in this style of relating may be those also underpinning forms of stigmatization, ostracism, and persecution (Kurzban & Leary, 2001). The emotions recruited in these roles tend to be ones of disgust, contempt, and hatred, and may have evolved from competencies regulating the avoidance of noxious substances (Shweder *et al.*, 1997). When a parent attacks a child in this way, the child is constructed as ‘the bad’, a source of disgust or contempt, not just the ‘subordinate other’. There is indirect evidence that some people can develop this orientation to themselves. For example, self-hating and wanting to get rid of aspects of the self is seen in people who self-harm or wish to ‘destroy’ parts of themselves (Strong, 1998). The language that an individual may use about aspects of themselves seems similar to that used to depict enemies and the stigmatized (i.e. they are [I am] disgusting, contaminating, can destroy the fabric of our society—[the good me]).

Although self-attacking is typically activated when people feel they have failed in important tasks, or if things go wrong, an alternative response to failure could be self-support or compassion for the self (Gilbert, 2000a; Kohut, 1971)—to focus on what one can do to try to reassure the self by (for example), focusing on one’s positives and active coping/resisting. Whelton (2000) called this *resilience* and found that no matter how harsh a self-criticism, students low in self-criticism (as measured by the DEQ) had more resilience and could defend themselves against their own criticisms. It is believed that a child adopts these self-reassuring responses (partly) from how parents have behaved towards them (caring and non-shaming) at times of failure and disappointment (e.g. Bowlby, 1980; Kohut, 1971); that is, through warmth and affection in early relationships.

In brief, different classes of interpersonal relationship can be identified, such as: dominant-subordinate relationships that function to coerce subordinates to behave in certain ways; stigmatizing and persecuting relationships to eject, expel, reject, distance, or destroy that which is seen to contaminate (and this form seems routed in a more persecuting, destructive, sadistic, and cruel orientation to others); and affiliative, warm, and forgiving styles of relating that grew out of attachment systems. Based on the idea that the competencies that evolved for social role formation are often recruited into self-evaluation, it is possible to suggest that people can adopt these various orientations in self-to-self forms of relating (Gilbert, 2000a). Hence people can be self-critical to try

to correct their behaviour; or because they have an active dislike of, or hatred for the self; or people can be relatively warm and reassuring to themselves.

There are a number of measures of self-criticism (e.g. Blatt *et al.*, 1982, Blatt & Zuroff, 1992). Thompson and Zuroff (2000) have recently developed a measure of self-criticism that relates to two evaluative domains of self-criticism: one resulting from negative comparisons with others, and one related to criticism over failing to meet internal, personal standards. However, current measures do not focus on *the forms* of self-attacking. For example, they do not allow differentiation of self-to-self attacks that take the form of dominant coercion of a subordinate to act in a certain way, in contrast to a form of contemptuous attacking, more akin to enemies and aimed at harming or wanting to destroy the self. This study, therefore, set out to develop a measure of forms of self-attacking when things go wrong for people. We wanted to see if self-attacking could be separated into those forms that are about drawing attention to failures and inadequacies and things that need improving, in contrast to more aggressive/disgust based, self-hating forms of self-attacking. Also, as there are no scales for measuring self-reassuring, and self-reassuring may be an important counter to the effects of self-criticism (Kohut, 1971; Whelton, 2000), we wanted to explore how self-reassuring (ability to focus on one's positives and be reassuring to self when things go wrong) might be related to self-criticism/attacking and depression.

As noted above, attacking self or others need not imply rejection or a wish to harm or destroy the self or other. Thus, a further aim of this study was to explore in more detail people's beliefs about *the functions* of their self-attacking; that is, what people see as the reason(s) for criticizing or attacking themselves. We wanted to explore if some reasons and functions of self-criticism/attacking are for self-correcting (as suggested by Driscoll, 1989), whereas others are aimed at harming the self, feeling disgusted, and wanting to reject and get rid of (parts of) the self, i.e. part of the self has become like an 'enemy within'.

Method

Participants

A total of 246 female psychology undergraduate students were used in this study (mean age 27.7 years, $SD = 7.2$). They completed a series of self-report scales, presented in the same order at the beginning of a lecture.

Measures

Centre for epidemiological studies depression scale (CES-D)

Depression was measured with the CES-D, which was developed to measure depressive symptomatology in non-psychiatric populations (Radloff, 1977). It is a 20-item scale which measures a range of symptoms (such as depressed mood, feelings of guilt, sleep disturbance), and respondents indicate on a 4-point scale (0-3) how often they have had the symptoms in the past week. Scores range from 0 to 60, with higher scores indicating greater depressive symptoms. Radloff (1977) found internal consistency coefficients of greater than 0.84. This scale has been recommended for use in a general population (Gotlib & Hammen, 1992).

Levels of self-criticism scale (LOSC)

The LOSC is a new scale developed by Thompson and Zuroff (2000), derived from considerable previous work on self-criticism by Zuroff and kindly made available for use in this study by the authors. The LOSC measures comparative self-criticism (Com S.C.) defined as a negative view of the self in comparison with others, and internalized self-criticism (Int S.C.), defined as a negative view of the self in comparison with internal, personal standards. Com S.C. items include 'I am usually uncomfortable in social situations where I don't know what to expect', and 'I fear that if people get to know me too well, they will not respect me'. Such items may reflect social anxiety concerns as much as self-criticism. Int S.C. items include; 'I get very upset when I fail', and 'When I don't succeed, I find myself wondering how worthwhile I am'.

The LOSC consists of 22 items (12 for Com S.C. and 10 for Int S.C.). Each item consists of a statement, and participants rate how well the statement describes them on a Likert scale from 1 (not at all) to 7 (very well). Thompson and Zuroff (2000) reported good reliability with Cronbach's alpha coefficients of 0.81 and 0.87 for Com S.C. and Int S.C., respectively. They also report a moderate correlation between Com S.C. and Int S.C. ($r = 0.45$). Cronbach's alphas for this study are given in Table 3.

Forms of self-criticizing/attacking and self-reassuring scale (FSCRS)

The items of this scale were derived from clinical work with depressed people where one of us (P.G.) had noted some typical thoughts depressed patients offered about their own self-criticisms and ability to self-reassure. In the first instance, it is unlikely that these are fully comprehensive, and other items could have been included, but we felt that they offered a reasonable reflection of typical self-criticizing/attacking thoughts and would provide sufficient variance to test our hypothesis. The original scale consisted of 24 items to examine how critical/attacking or how supportive/reassuring people are when things go wrong for them. To a first probe statement: 'When things go wrong for me ...' participants respond on a 5-point Likert scale (ranging from 0 = not at all like me, to 4 = extremely like me) on series of questions: e.g. 'I am easily disappointed with myself; there is a part of me that puts me down; I find it easy to forgive myself; I encourage myself for the future'. The full scale with the principal-components analysis is given in Table 1.

Functions of self-criticizing/attacking scale (FSCS)

Like items of the FSCRS, the items for the FSCS were derived from clinical work with depressed people where one of us (P.G.) had noted some typical reasons and functions that depressed patients have offered about their own self-criticisms. Again, it is unlikely that these are fully comprehensive, and other items could have been included, but we felt that they offered a reasonable reflection of typical reasons/functions people have for self-attacking and would provide sufficient variance to test our hypotheses. Moreover, the items seemed to offer a reasonable opportunity to see if desires to harm the self would separate out from self-improvement or correction. Following a probe statement, 'I get critical and angry with myself', there are 21 questions reflecting possible reasons for self-attacking. Participants respond on a 5-point Likert scale (ranging from 0 = not at all like me to 4 = extremely like me). Items include: 'to make sure I keep my standards up; to stop me being lazy', through to more persecuting and

Table 1. Component loading in the Forms of Criticism/Self-Attacking and Self-Reassuring Scale

Item no.	Content of question	Component 1 Inadequate self	Component 3 Reassure self	Component 2 Hated self
20	I think I deserve my self-criticism	.80	.16	
16	I remember and dwell on my failings	.76		
6	There is a part of me that feels I am not good enough.	.73	-.18	
1	I am easily disappointed with myself	.73		
7	I feel beaten down by own self-critical thoughts	.72	-.13	
2	There is a part of me that puts me down	.72	-.19	
19	I can't accept failures and setbacks without feeling inadequate	.72		.10
22	There is a part of me that wants to get rid of the bits I don't like	.58		.16
4	I find it difficult to control my anger and frustration at myself	.51	.11	.33
8	I still like being me		.77	-.15
3	I am able to remind myself of positive things about myself		.75	.15
15	I find it easy to like myself	-.21	.74	
23	I encourage myself for the future	.19	.73	-.24
13	I can feel lovable and acceptable		.73	-.16
18	I am gentle and supportive with myself	-.29	.60	.12
5	I find it easy to forgive myself	-.29	.52	.24
21	I am able to care and look after myself		.49	-.12
9	I have become so angry with myself that I want to hurt or injure myself			.75
10	I have a sense of disgust with myself	.15	-.16	.73
14	I stop caring about myself	.16	-.17	.65
17	I call myself names	.29		.60
24	I do not like being me	.18	-.44	.43

Note. Items 11 and 12 were removed due to poor psychometric properties. Factor items in bold.

self-harming reasons of 'to destroy part of me; to harm part of myself'. The full scale with the principal-components analysis is given in Table 2.

Results

Principal-components analysis of the forms of self-criticizing and self-reassuring scale

A principal-components analysis with oblimin rotation was conducted with a cut-off point of 0.4 for the inclusion of an item in the interpretation of a component. Oblimin rotation was chosen because the underlying components were hypothesized to be related. The Kaiser-Mayer-Olkin measure of sampling adequacy statistic was 0.929.

Examination of the scree plot indicated a three-component solution, which accounted for 58.32% of the variance. The eigenvalues were: 9.24, 2.13, and 1.46 (with the fourth being .98 and the fifth .85), respectively. Therefore, a principal-

Table 2. Component loading in the Functions of Self-Criticism/Attacking Scale

Item no.	Content of question	Component 1 Self-correction	Component 2 Self-persecution
14	To make me concentrate	.83	-.16
20	To remind me of my responsibilities	.82	
5	To stop me being lazy	.80	-.12
7	To keep myself in check	.77	
17	To prevent future embarrassments	.74	
19	To keep me from making minor mistakes	.72	.13
16	To stop me becoming arrogant	.70	
3	To show I care about my mistakes	.70	
11	To stop me getting overconfident	.70	
1	To make sure I keep up my standards	.66	
18	To remind me of my past failures	.56	.37
15	To gain reassurance from others	.52	.20
12	To stop me being angry with others.	.51	.15
10	To take revenge on part of myself		.91
9	To cope with feelings of disgust with myself		.87
13	To destroy a part of me	.10	.86
6	To harm part of myself		.82
4	Because if I punish myself I feel better		.82
21	To get at the things I hate in myself		.82
8	To punish myself for my mistakes	-.24	.69
2	To stop myself being happy		.52

Factor items in bold.

component analysis with direct oblimin rotation was conducted, specifying a three-component solution. Component 1 correlated with components 2 and 3 at 0.399 and -0.436 , respectively, and component 2 and component 3 correlated at -0.276 .

Two items (11 and 12) were omitted during the analyses. Neither item 11 'I try to boost myself up' nor item 12 'I think I deserve it' correlated significantly with the other items. Item 12 was aimed to tap feelings of 'deserving to fail' but was inappropriately worded, and some participants left it blank or with a question mark by it. Therefore, these two items were omitted from the analysis as recommended by Field (2000). Factor items are given in bold.

The first of the three specified components accounting for the largest percentage of the variance consisted of nine items which we labelled 'inadequate self'. It captures a sense of feeling internally put-down and rendered inadequate by failures and setbacks. The highest loading item was 'I think I deserve my self-criticism', with the second highest item being 'I remember and dwell on my failings'. Other items included 'I am easily disappointed with myself'.

A second component consisted of seven items and could be labelled 'reassured self'. The highest loading item was, 'I still like being me', indicating a positive warm disposition to the self, with the second highest item being, 'I am able to remind myself of positive things about myself'. Other items included, 'I encourage myself for the future'. Self-reassuring came out as a separate component, and the items of self-reassuring seem to form a coherent component, though, again, more detailed research might find different types of self-reassuring in different contexts. It would also be

interesting to study those who can be caring, reassuring, or supportive of others but not themselves.

A third component consisted of five items and could be labelled as 'hated self'. The highest loading item was, 'I have become so angry with myself that I want to hurt or injure myself,' with the second highest item being, 'I have a sense of disgust with myself'. This seemed to capture a more destructive, disgust-based response to setbacks (rather than inadequate) characterized by self-dislike and an aggressive/sadistic/persecuting desire to hurt the self. It is possible that additional items directly measuring self-hatred and self-contempt would have strengthened this component. We were surprised that the item, 'There is a part of me that wants to get rid of the bits I don't like' loaded on the inadequate component rather than the hated-self component. Although the reasons for this are unclear, it is possible that in this young, student, female population, they may have had in mind relatively minor self-attributes (e.g. aspects of physical shape or appearance) or that they saw such desires to be in the service of self-improving rather than self-hating. As a preliminary result, it would seem possible to distinguish self-criticism that is focused on feeling disappointed and inadequate, from self-criticism of anger and disgust with the self. Indeed, it is probably possible to feel inadequate, and even a failure at times, but still basically like the self.

The self-reassuring component could have emerged as an artefact of having positively worded items. One negative item, 'I do not like being me', loaded on both self-reassuring and the third component of hated-self. For this analysis, given the wording of the item, we retained it in the self-hating component, even though it loaded negatively, marginally higher on the self-reassuring component.

Principal-components analysis of the functions of self-criticizing/attacking scale

What about the reasons for, and perceived function of, self-attacking? If there are different underlying mechanisms in self-attacking, and especially differences in contempt-anger-disgust with self, we would expect these to show up in reasons/functions for self-attacking, which in fact is the case.

A principal-components analysis with oblimin rotation was conducted with a cut-off point of 0.4 for the inclusion of a variable in the interpretation of a component. Oblimin rotation was chosen because the underlying components were hypothesized to be related. The Kaiser-Mayer-Olkin measure of sampling adequacy statistic was 0.921.

Examination of the scree plot indicated a two component solution, which accounted for 57.75% of the variance. The eigenvalues were 9.01 and 3.12 (with a third component being 1.09, and the fourth being .91). When we looked at a three-component solution, the composition of the items was hard to interpret, whereas a two-components solution appeared more reasonable and intelligible. Therefore, a principal-components analysis with oblimin rotation was conducted, specifying a two-component solution.

The first of the two specified components for the functions of self-criticism was labelled *self-improving and self-correcting (self-correction for short)*. Thirteen of the 21 items loaded on this component. The highest loading item was 'to make me concentrate'. Other items included, 'to remind me of my responsibilities', and 'to stop me being lazy'. Many depressed people offer such reasons for self-attacking, fearing they might become inadequate or lazy unless they keep criticizing themselves and coercing themselves into action. In a sense, this may be felt as a kind of self-coercion 'for one's own good'.

The second component was labelled 'self-persecution' and consisted of eight items. The highest loading item was 'to take revenge on part of myself'. Other items included 'because if I punish myself I feel better' and 'to cope with feelings of disgust in myself' and 'to destroy part of myself'. We call this persecution because it denotes a level of aggression to the self, which is about hurting, harming, and taking revenge.

Taken together, these components are suggestive of there being different forms and functions to self-criticizing/attacking (Gilbert, 2000a). This invites more specific research on how these different forms develop, are related to different psychopathologies and respond to treatment.

Descriptive statistics of measures

Table 3 shows the means, standard deviations and Cronbach's alpha coefficients for depression, the LOSC (internalized self-criticism and comparative self-criticism), the three components of the '*forms* of self-criticizing and self-reassuring scale' (FSCRS) and the two components of the '*functions* of self-criticizing/attacking scale' (FSCS).

Table 3. Mean, standard deviation, and Cronbach alpha levels

	M	SD	α
CES-D ($n = 246$)	18.20	11.99	0.93
LOSC-Int ($n = 200$)	42.04	12.48	0.90
LOSC-Comp ($n = 200$)	41.64	10.11	0.71
FSCRS F1 ($n = 246$)	16.75	8.44	0.90
FSCRS F2 ($n = 246$)	3.86	4.58	0.86
FSCRS F3 ($n = 246$)	19.81	5.92	0.86
FSCS F1 ($n = 245$)	19.27	11.10	0.92
FSCS F2 ($n = 245$)	4.80	6.43	0.92

Note: CES-D = Depression; LOSC (Int) = Internalized Self-Criticism; LOSC (Comp) = Comparative Self-Criticism; FSCRS F1 = Inadequate Self; FSCRS F2 = Hated Self; FSCRS F3 = Reassured Self; FSCS F1 = Self-Correction, FSCS F2 = Self-Persecution.

Correlations between measures

In order to explore how these self-criticism/attacking measures are interrelated, how they performed against other self-criticism scales (Thompson & Zuroff, 2000), and how they are related to depression, a Pearson product-moment correlation matrix was calculated. Table 4 shows the correlation between age, depression, internalized and comparative self-criticism, the three components of the FSCRS, and the two components of the FSCS.

There was a small but significant effect of age, with younger people being slightly more self-hating than older people. The reasons for this are unclear. All measures of self-criticism had significant associations with depression, with the aggressive type of self-attacking (hated self) and self-persecution having particularly high correlations. Interestingly, although self-improving/correcting functions of self-criticism were correlated with depression, it is only at a moderate level of $r = .30$.

Table 4. Correlation between all components

	Age	CES-D	Int S.C.	Com S.C.	Inadequate Self	Hated Self	Reassured Self	Self-Correction
LOSC								
CES-D	-.05							
Int S.C.	.02	.48**						
Com S.C.	.01	.49**	.53**					
Inadequate Self	-.12	.52**	.77**	.63**				
Hated Self	-.14*	.57**	.45**	.55**	.68**			
Reassure Self	.09	-.51**	-.45**	-.63**	-.57**	-.56**		
Self-Correction	-.12	.30**	.46**	.21**	.50**	.34**	-.12	
Self-Persecution	-.11	.52**	.49**	.48**	.65**	.80**	-.49**	.51**

CES-D = Depression; Int S.C. = Internalized Self-Criticism; Com S.C. = Comparative Self-Criticism.
 * $p < .05$; ** $p < .01$.

On the whole, these new measures performed well against other measures of self-criticism (the LOSC; Thompson & Zuroff, 2000), although it should be noted that the LOSC measures different aspects of self-criticism/attacking. Interestingly, self-criticism arising from internalized standards (Int.S.C. taken from the LOSC) has a very high correlation with inadequate self ($r = .77$) and significantly higher ($p < .001$) than with hated self ($r = .45$). This may indicate that people can feel inadequate, as judged by their own self-evaluative standards, and can be disappointed in themselves, but not necessarily hate themselves or like being ‘themselves’. Also, interestingly, self-criticism based on feeling inferior to others (Com S.C. from the LOSC) had a significant but relative low correlation with self-correction ($r = .21$). Presumably, one can be self-critical to try to improve oneself (e.g. as a sports person might do to gee themselves up—‘come on—concentrate, focus’) without necessarily feeling inferior to others.

Generally, when the function of self-criticism is to harm and persecute the self, this appears to be more pathogenic than when self-criticism is for self-improvement. For example, testing for significant differences between correlations we found that compared with self-correction, the correlations between self-persecution with depression are higher ($r = .30$ vs. $r = .52$; $p < .0001$) and with hated self much higher ($r = .34$ vs. $r = .81$, $p < .0001$). Again, this may indicate that self-correction and self-improvement need not imply active dislike of, or disgust with, the self. However, as noted in our discussion (the case of Clare), these two forms of self-criticism can have complex interactions that may change with affective state.

Self-reassuring was negatively correlated with depression and the other forms of self-criticism/attacking. It would appear that people who self-criticize and attack themselves when things go wrong may have a relatively poor ability to self-reassure or focus on their positives. However, note that although the self-improving/correction *function* has a negative association with self-reassuring, it is low and non-significant. This may imply that one can be self-critical, but when the function is to self-improve/correct, one can also be self-reassuring and supportive.

Relationships between forms of self-criticism/attacking and self-reassuring, and the functions of self-criticizing/attacking

The pattern of correlations suggests complex relations amongst these self-to-self processes. To examine further the structure of the functions and forms of self-criticism/attacking, and to analyse the usefulness of the presented measures and their impact on depression, multiple regression analyses were applied to carry out a path analysis. A mediational model, as described by Baron and Kenny (1986), was tested. The model postulated that the two functions and reasons why people self-criticize and attack (namely here to self-improve/correct or to harm/persecute the self) would determine the forms criticism can take (i.e. to focus on inadequacy in the self, or hatred of the self). Also, we postulated that if one can reassure the self and focus on one’s positive this will mediate the effects of self-criticizing/attacking on depression.¹ Brief results of the analysis are presented in Fig. 1, with full details presented in Table 5.

The first stage of the analysis was to examine the effect of the two functions on the two forms of self-criticism/attacking and self-reassuring. As the proposition was that the

¹We were guided to this formulation and analysis by Marc Fournier, who reviewed a previous draft of this paper, and to whom we express our gratitude.

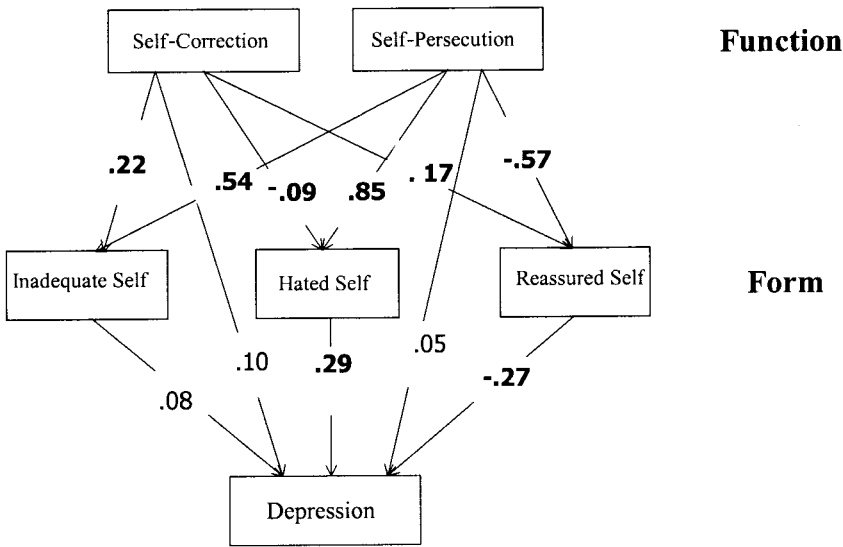


Figure 1. Path analysis showing the effect of functions mediated by forms, with standardized parameter estimates labelled. (Statistically significant paths at $p < 0.05$ are shown in **bold**)

functions of self-criticism/attacking determine the specific form it takes, a four-step analysis, checking for a mediational model, was conducted.

The first test of a mediational model is to determine if the predictor variables do have an impact on the dependent variable. The first regression analysis examined the perceived functions of self-criticism/attacking and their impact on the level of depression (Regression Analysis 1). Using both functions a significant model, $F(2, 244) = 45.25, p < .001$, to predict levels of depression with $R^2 = .52$ was obtained (The parameter estimates for each of the analyses are shown in Table 5; note that the regression weight for self-correction is small and does not achieve statistical significance. We chose to retain this variable in the analysis because of its significant correlation with CES-D scores and because self-correction in the model has an affect on the regression weight for self-persecution).

The second step is to ensure that the independent variable can predict the hypothesized mediators. The second step therefore involved the test of the ability to predict the form self-criticism/attacking can take through the function these criticisms serve. The three regression analyses showed significant results for: inadequate self: Analysis 2a: $F(2, 244) = 104.55, p < .001, R^2 = .46$; hated self, Analysis 2b: $F(2/244) = 221.9, p < .001, R^2 = .64$; and reassure self, Analysis 2c: $F(2, 244) = 42.12, p < .001, R^2 = .26$.

Self-attacking with a perceived persecuting function for the self has a particular impact on the form 'hated self' (standardized beta estimate = .85, $p < .001$) but also strong implications for inadequate self (standardized beta estimate = .54, $p < .001$) and reassure self (standardized beta estimate = $-.57, p < .001$). If the perceived function of self-criticizing/attacking is being used for self-correction, the greatest impact appears on the form of inadequate self (standardized beta estimate = .22, $p < .001$).

The third analysis step examines whether the hypothesized mediators do impact upon the dependent variable. Therefore, the third test (Regression Analysis 3) involved tested whether the forms self-criticism takes and the ability to self-reassure can predict

Table 5. Path analysis steps

DV	Standardized estimate	t	p
Regression analysis 1: DV: Depression $F(2, 244) = 45.3, p < .001, R^2 = 0.27$			
Self-Correction	0.05	0.79	0.43
Self-Persecution	0.49	7.78	<0.001
Regression analysis 2a DV: Inadequate Self, $F(2, 244) = 104.55, p < .001, R^2 = .46$			
Self-Correction	0.22	4.09	<0.001
Self-Persecution	0.54	9.91	<0.001
Regression analysis 2b DV: Hated Self, $F(2, 244) = 221.9, p < .001, R^2 = .64$			
Self-Correction	-0.09	-2.00	0.046
Self-Persecution	0.85	19.11	<0.001
Regression analysis 2c DV: Reassured Self, $F(2, 244) = 42.12, p < .001, R^2 = .26$			
Self-Correction	0.17	2.66	0.008
Self-Persecution	-0.57	-8.92	<0.001
Regression analysis 3 DV: Depression, $F(3, 243) = 52.69, p < .001, R^2 = .40$			
Inadequate Self	0.15	2.12	0.035
Hated Self	0.34	4.75	<0.001
Reassured Self	-0.24	-3.80	<0.001
Regression analysis 4 DV: Depression, $F(5, 241) = 32.47, p < .001, R^2 = .40$			
Self-Correction	0.10	1.62	0.106
Self-Persecution	0.05	0.52	0.602
Inadequate Self	0.08	1.05	0.300
Hated Self	0.29	3.18	0.002
Reassured Self	-0.27	-4.08	<0.001

levels of depression. The independent influence of the forms 'inadequate self', 'hated self', and 'reassured self' were able to predict the level of depression, $F(3, 244) = 52.69, p < .001, R^2 = .40$.

The final analysis step is to examine whether the hypothesized mediators do mediate the relationship between the predictor variables and the outcome variables. The question is whether the mediation is partial or complete. The fourth test (Regression Analysis 4) therefore involves a test of the final model using the two functions (self-correction and self-persecution), with the two forms of self-criticizing/attacking (focusing on self-inadequacies and hating the self) and self-reassuring. If the form that criticism takes fully mediates the functions of self-criticism, these functions should not show any significant effect on depression if the effects of the forms are controlled. Interestingly, self-correction shows a standardized beta weight of .10 ($p > .05$) when mediation effects are controlled for. Similarly, the variable self-persecution has a non-significant relationship to depression when the mediation effects are controlled.

In other words, it is the context of not liking the self and self-disgust that harming/persecuting the self may be most pathogenic. Perhaps, this implies that it is possible to

feel very angry with oneself and even want to hurt or take revenge on oneself (maybe out of frustration), but if underneath this, one basically likes oneself, then it has less impact on depression. Because our scale does not allow us to explore impulsive lashing out at self (e.g. out of frustration), we cannot say for sure. An example of this may be a case treated by P.G., who, when he became frustrated with himself, had smashed his fist into a wall, breaking a bone in his hand but when not 'frustrated with himself' thought he was a 'reasonably good and worthwhile' person. He also preferred to 'take his anger out on himself' rather than on others, which he saw as a 'good' trait. So there is still much to do to develop our understanding and methodologies in this area.

These analyses show that the level of depression in students can be predicted with the functions self-correction and self-persecution, the two forms of self-attacking (inadequate self and hated self), and the ability to reassure the self and focus on one's positive, $F(5, 241) = 32.47, p < .001, R^2 = .40$. It also suggests that the three different ways of treating the self were significant mediators of the two different functions, self-correction or self-persecution. Put another way, the perceived functions of self-criticism/attacking serve to determine the specific form that self-criticism/attacking takes. Furthermore, the analyses allow differentiation of the individual influence of each aspect of self-criticism and attacking. Figure 1 illustrates the independent contributions of the variables on the level of depression. Especially powerful in this model is the form of self-hatred (standardized beta estimate = 0.29, $p < .01$) and the protective effects for the ability to reassure the self (standardized beta estimate = $-.27, p < .001$).

Comparing this analysis with the correlation matrix (Table 4) shows that using a self-persecution attacking strategy acts as a suppressor variable for the self-correction function. The bivariate correlation between self-correction and reassured self was $-.118$ (negative, non-significant), but when a regression analysis is carried out, including the variable self-correction, the regression estimate is 0.17, a change from a negative, and now a significant effect. The effect of self-correction on reassuring is positive, when controlling for self-persecution. What this implies is that there is an aspect of self-correcting that reflects a more positive orientation to the self when one controls for self-hating. Hence, as indicated above, people can be self-critical at times, but this does not mean that they dislike themselves or have self-disgust (hate-self). They may like themselves but think that being harsh on themselves and dwelling on their mistakes will improve them—and presumably they are worth trying to improve. Also, as noted, people may be impulsively aggressive with themselves but necessarily hate themselves.

Conclusion

This study set out to see if there are different forms and functions of self-criticizing/attacking. To date, most cognitive-based theories tend to see self-criticizing/attacking as a single process (e.g. Beck *et al.*, 1979; Blatt *et al.*, 1982), and current measures (e.g. the DEQ) do not allow discrimination of types of self-criticizing/attacking. We found, however, that feeling inadequate could be separated from more hateful feelings for the self. Moreover, we found that the perceived functions of self-criticizing/attacking could be separated into self-correction and distinguished from desires to persecute or hurt the self for failing. We also found that the forms of self-criticizing/attacking mediate the functions; that is, the effects of self-correction and self-persecution on depression are mediated by the forms of self-hating vs. self-reassuring.

These are early days for this type of research, but our data may suggest that therapists

may need to explore in detail the functions of self-criticizing/attacking and for some people illuminate the possible aggressive/disgust feelings and emotions that can come with some forms of self-criticizing/attacking. Some forms of self-criticizing/attacking seem sadistic. Further, there is a need to explore how people respond (to defend themselves) to their own attacks (Greenberg & Paivio, 1997; Whelton, 2000). Indeed, it is believed that in some forms of personality disorder (e.g. borderline personality disorder), the degree of hatred and disgust with the self is one reason for physically attacking the self, i.e. self-harm (Strong, 1998). It is also interesting that for patients with psychosis who hear voices, the voices are often malevolent, aggressive, insulting, and threaten harm (Chadwick & Birchwood, 1994; Nayani & David, 1996). People can have strong desires to escape such voices (Gilbert *et al.*, 2001). Taken together, such findings indicate a need for more research to explore and understand the hostile and harmful intent of internal self-criticizing/attacking, their developmental origins (e.g. in early abuse), how they are implicated in different disorders, and ways to work with these affect-based experiences (Gilbert, 2000a).

We caution in assuming that these are different trait-like vulnerabilities. For example, a patient, Clare, treated by P.G. felt that her mother had been very critical of her because she wanted her to succeed and be special. Her mother instilled a very competitive orientation to life, and Clare often used self-criticism to make herself work hard(er) to be special. However, as she felt increasingly unable to live up to these harsh standards and became depressed, she noted that her form of self-criticism changed. She became, she said, 'horrified by the state she had got into'. Her self-criticizing/attacking took a far more sadistic form of wanting to harm her and tell her 'she would be better off dead; she was a waste of space'. She had images of wanting to cut herself and felt that if she did, her blood would be black and all the badness would flow out. Moreover, while she wanted to get rid of her self-hatred, she was unsure about changing her self-improving form of self-criticism because she felt that it helped her succeed and become lovable.

Teaching depressed people skills to re-evaluate their self-criticisms/attacks often involves a form of self-reassuring such as focusing on one's positives and reducing black and white thinking (Beck et al., 1979). This might work well for those with self-improving or self-correcting types of self-criticism, especially if they basically like themselves. It is unclear if they will work as well for self-persecutors and self-haters. Another way of working with self-criticizing/attacking is to help people de-centre themselves from their negative self-directed thought/feelings by teaching mindfulness techniques (Segal, Williams, & Teasdale, 2002). Teasdale (1999) has argued that as people become depressed, they access negative (self-attacking) thoughts that easily spiral them downwards. This study suggests that there may be different types of self-attacking thoughts/feelings that 'come on line' and that it may be accessing hostile affect (self-disgust and hatred) that is particularly pathogenic. Based on the idea that self-reassuring and developing affiliative relationships to the self operate through systems that evolved for affiliative and affectionate-attachment, Gilbert (2000a) has recently suggested value in helping people develop inner warmth and compassion for the self as a counter *affective* response to self-disgust and hatred. Clare had not internalized an ability to be empathic to her distress or reassure herself when feeling low or failing at things. She 'hated' feeling weak, depressed, and vulnerable. Developing abilities for compassionate and warm re-evaluations of the self and tolerating negative feelings with empathic support had a major impact on her recovery. At the end of therapy, she reflected that trying to focus on her positives (as we had in the early days of our work together) had felt like self-criticism as if she was telling herself 'You must

learn to focus on your positives and not think in black and white!’ She noted that compassionate re-evaluation felt very different and was much harder for her.

We note that one does not need an evolutionary approach to interpret these findings. For example, they could be seen as forms of internalization of relationships and scripts, as outlined in the relational schema approach (e.g. Baldwin & Fergusson, 2001) and many other therapies (e.g. Greenberg *et al.*, 1993; Kohut, 1971). Individuals come to treat themselves as others have treated them. We do not see these approaches as alternatives, however. What the evolutionary approach can add is the suggestion that there may be specific brain systems that allow for specific forms of relating (e.g. affectionate attachment, dominant-subordinate, enemy-stigmatized) and thus their recruitment into self-to-self relationships. Interestingly, Clare (noted above) did not think (consciously at least) that her mother hated her (but wanted to see her as a special child). However, Clare came to hate herself when she became depressed because she could not live up to these standards. Because her loss of energy and low mood made it even harder to succeed (and hence feel lovable), she wanted to destroy this ‘weak-depressed-needy and [as she saw it] pathetic part of herself’. Hating and the wish to destroy, eject, or reject and get rid of that which contaminates and damages the self may be rooted in our evolved systems for dealing with (what we see as) contaminants (Shweder *et al.*, 1997). Self-compassion may be one way of working with such difficulties.

There are a number of weaknesses to this study. First, our participants come from a particular social group (students), age, and gender. It remains to be seen how far our findings replicate in other populations, such as older people, men, and different types of patients. Second, we recognize that our measures remain uncomfortably crude compared with the complexity of these issues but hope this encourages others to develop more compressive measures of self-attacking that focus on differences in internal, self-to-self-relationships. The data should be seen as suggestive, requiring more rigorous measure development and methods. Third, our data do not distinguish between those who become aggressive with the self out of frustration, but when not frustrated have a more benign self-relationship, from those who have a more chronic sense of self-dislike. Fourth, although the hated-self component works well psychometrically, we feel that it could be significantly improved in content, and it is questionable how much ‘hate’-based emotion it actually taps.

Fifth, although we have shown that the ability to self-reassure is inversely related to self-attacking, we are not able to say if there are any differences in self-reassuring. For example, when things go wrong, some people may focus on previous personal accomplishments, while others may use coping strategies that are more directly focused on emotional control and relationships, e.g. by using actual (or memories of) attachment objects (e.g. Bowlby 1980; Kohut, 1977). We suspect that self-reassuring is itself a complex process with different components such as the ability to remind oneself of one’s positives, past successes, and abilities, the capacity to tolerate disappointment and feeling vulnerable, and the ability to have compassion for the self. Some forms of reassuring may be about encouragement and ‘geeing oneself up—energizing’, while others may be soothing and calming oneself down. However, given the increasing recognition of the importance of the ability to self-reassure, even when one is self-critical or disappointed with oneself (e.g. Kohut, 1971, 1977; Whelton, 2000), illuminating the types/forms, capacity, origins, and ability to develop self-reassuring (and reduce aggression to the self) may be an important therapeutic task (Gilbert, 1997, 2000a).

Finally, we would like to draw attention to the fact that we have not addressed another potentially very important function of self-criticism, captured by our opening reference to Billy Connolly. Here, criticism and self-devaluation are not the result of failures but arise when trying to do new things; that is they are about *not* taking risks or *not* trying to improve the self (e.g. 'You'll never be able to do that; this is beyond you'). While this may arise from internalizing the shaming from others, the evolutionary function may be to inhibit behaviour and maintain (non-conscious) subordinate (low risk) strategies in a world that is potentially punitive. We also note that an 'attacker's' put-downs (e.g. a parent on a child) can be stimulated by envy (Gilbert, 1992). For example, one patient recently reflected that "My mother used to put me down a lot, I think because she could not bear the thought that I could do things better than her, she needed to keep reminding me that she was better than me, I was the child, and I needed her. Maybe she was jealous of my abilities—I don't know'. Helping people understand the complex origins, styles, and functions of their self-criticism may be important in helping people change them. Here, we hope to have shown that self-criticism is a complex multifaceted experience that we have yet to fully understand—it is far more than just negative self-evaluation, and interventions that work for one type may not work for another.

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