

Autobiographical memory for emotion

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Respondents were interviewed by individual interviewers who knew them well. They were encouraged to describe times in their lives when they had experienced named emotions. Content analysis of the transcribed responses revealed that the descriptions were largely objective accounts of events that were of different types for the different emotions. Behavioral and physiological responses were infrequently mentioned.

Autobiographical memory for emotion has been studied using a variety of techniques. One procedure, for example, has required subjects to react to a neutral cue word or an emotion name by recalling a personal experience relevant to the cue (e.g., Conway & Bekerian, 1987; Davis, 1987; Davis & Schwartz, 1987; Teasdale, Taylor, & Fogarty, 1980; Williams & Broadbent, 1986; Williams & Dritschel, 1988). Usually, the dependent variable studied has been reaction time rather than the content of the experiences, although there are exceptions (e.g., Robinson, 1976; Williams & Broadbent, 1986).

Another procedure, employed by Shaver, Schwartz, Kirson, and O'Connor (1987), required subjects to recall instances of when they had experienced love, joy, anger, sadness, and fear, and to describe in detail the circumstances of each event, what they had felt and thought, how they had behaved, and how the event was resolved. From these descriptions, the authors constructed prototypes of the five emotional experiences.

The aim of the present study was to explore the personal memories of 12 emotions or emotion-like states through the use of semistructured interviews. It thus resembles Shaver et al. (1987) in concentrating on the content of emotional experience, but differs in that interviews rather than questionnaires were used and in that the kind of material the subjects should recall was not specified.

METHOD

Respondents

Each respondent was selected and interviewed by a different interviewer, of the same sex as the respondent. All of the interviewers were given the same verbal and written instruction on conducting interviews, and were asked to choose a respondent with whom they were on friendly terms. This method was based on that used by Toch (1972) to investigate violent men. Eighty-three respondents were interviewed, 21 of them male. Their ages ranged from 19 to 74 years, with a median age of 26.

The interviewers were all participants in an advanced course on social psychology.

We are grateful to Fiona Leonard for carrying out some pilot work for the research, and to Barrie Stacey for his useful advice in the planning. We should also like to acknowledge the willing cooperation of the 83 interviewers who made the research possible. Please address correspondence to either K. T. Strongman or S. Kemp, in the Department of Psychology, University of Canterbury, Christchurch, New Zealand.

Procedure

The respondents were interviewed in comfortable private surroundings. They were informed that the interview was part of an investigation into how people remember their emotions and emotional experiences. The interviewer named 12 emotions and for each, in turn, asked the respondent to remember a time he or she had experienced the emotion.

The 12 emotion words presented to each subject were: *disgust, anger, shame, embarrassment, distress, fear, sorrow, joy, surprise, ecstasy, lust, and excitement*.

The order of naming the emotions was retained in all interviews, although occasionally respondents did not recall experiencing a particular emotion when it was first mentioned, but did at a later stage of the interview.

The interviewers recorded what the respondents said, occasionally asking for clarification or prompting gently (e.g., "Can you remember anything?"). When a remembered occasion had been described, the interviewer asked the respondent when it had taken place, if this was not apparent from the account given. The only variations from this procedure involved the respondents' asking for clarification of the meaning of a particular word (e.g., *ecstasy*). Clarification was always given in a simple, nondirective way.

All interviewers returned transcripts of their interviews, and included remarks made by both the respondent and the interviewer. These transcripts were slightly edited by the interviewers to remove proper names and other possible aids to identifying the respondent.

RESULTS

All but one of the respondents replied to the emotion labels by describing briefly or at length a particular incident or incidents when they had experienced the emotion. Overwhelmingly, the descriptions were of "objective" details of the events rather than of the feelings of the respondents. Although this result may seem obvious, it was not a necessary consequence of the instructions: Respondents were not told to describe incidents that aroused emotional experiences but to remember a time they had experienced the emotion.

Another unsurprising, but still important, result was that all but 4 of the total of 912 emotional experiences were clearly described from the point of view of the respondent rather than from that of an outside observer. This result replicates a finding by Nigro and Neisser (1983).

Content analyses of the types of incident described under each of the emotion labels was carried out. Descriptions of events and experiences were generally clear, and categorization was straightforward.

Table 1
Numbers of Respondents Recalling Different Types of Incident under the 12 Emotion Labels

Emotion Label	Major Categories	Number of Respondents		Number Not Recalling
		Number	Percentage	
Disgust	Involving vomit or human excretion	16	19	4
	Attitudes prevalent in the modern world, e.g., racism, degeneracy of youth	11	13	
	Sexual behavior	11	13	
Anger	Behavior of close relative or friend	28	34	3
	Relationship breakup	14	17	
	Work problems	10	12	
Shame	Truancy, lying, stealing, cheating	21	25	16
	Physical or verbal nastiness	21	25	
	Sexually related	10	16	
Embarrassment	Public appearance, involving spectators	42	51	2
	Private incident	23	28	
	Clothing related, e.g., seen naked	11	13	
Distress	Death or illness	26	31	8
	Helplessness in danger or difficulties	19	23	
Fear	Violence, actual or potential	21	28	1
	Night fears, or fears of dark	15	18	
	Miscellaneous phobias	14	17	
	Medical	13	16	
Sorrow	Death of relative or friend	46	55	2
Joy	Birth	14	17	2
	Success at work or with examinations	14	17	
	Marriage or being with lover	13	16	
Surprise	Social, unexpected meetings or calls	21	25	2
	Presents	19	23	
	Successes	19	23	
	Behavior of others	14	17	
Ecstasy	Sex	21	25	16
Lust	During or expecting sex	28	34	16
	Someone seen or briefly met	26	31	
Excitement	Travel	21	25	2
	Social events	18	22	
	Personal achievement	14	17	

Note—Examples of responses:

Anger: “‘Twas the night before Christmas. I was in town with little children in the car trying to get a park. I tried to back into a carpark and two young youths who were obviously . . . two or three of them in their tidy work clothes . . . were obviously having a bit of fun because their office closed early, and they came up behind and pushed in to the thing and pushed against my car and pushed me out. I was blind with rage. I couldn’t do a thing about it but drive away, and I was so annoyed because I had business to do and young kids in the car” (female, 47).

Fear: “About four years ago a prostitute tried to pick me up in a pub so I humored her a bit, which was pretty silly, and then walked out. She followed me and since I wouldn’t stop, she got about four of her mates onto me. They stood around me and one pulled a knife and said if I didn’t want her I’d have to pay anyway. I just pushed him and ran for my life” (male, 21).

Sorrow: “My most recent experience of sorrow was in January, and since January . . . when my husband died. Ahh, it’s a strange sorrow, a kind of sorrow for what might have been for him, if he had had a more compatible person to live. I just feel sad for him” (female, 63).

Joy: “It was when my two boys were born—it’s a special feeling. I think the birth of the first one, because it was the first. I remember feeling really exhausted, my eyes were probably bulging out of my head from pushing . . . he was a really big baby . . . when they laid him on my stomach and started cleaning him up a bit and his little eyes were all open and squinty. It was the most amazing feeling. I felt, you know, I did this. I suppose there was a lot of pride in there and relief that he was okay, but mostly it was just a very joyful experience” (female, 43).

Table 2
Distribution of Respondents' Responses (in Percentages)

Emotion	Time of Event			Specific Incidents	Empathetic Experience	Behavioral Response	Physiological Response
	Childhood	Adulthood	Preceding Month				
Disgust	9	66	25	85	58	8	10
Anger	20	64	16	84	14	29	5
Shame	42	52	6	87	1	5	0
Embarrassment	27	56	17	91	2	8	8
Distress	19	67	15	89	7	13	7
Fear	25	61	14	84	2	15	11
Sorrow	19	78	4	93	15	8	1
All negative	23	63	14	87	15	12	6
Joy	10	80	10	83	5	4	4
Surprise	14	71	15	91	3	1	1
Ecstasy	3	82	15	75	3	6	2
Lust	9	70	22	73	0	2	5
Excitement	10	79	11	76	1	4	5
All positive	9	77	14	80	2	3	3
All emotions	17	69	14	84	10	9	5

In some cases, respondents reported more than one incident. Where this occurred, only the first fully described incident was examined for each respondent and each emotion. Thus, in the results reported below, numbers of respondents and numbers of incidents are equated.

Table 1 shows the major categories or types of incident that were described as the occasions on which the 12 different emotions were experienced. Some noteworthy features are evident. First, some emotions are clearly more linked to a particular type of memory than to others. Thus, sorrow was generally remembered as accompanying the death of someone close, whereas joy and disgust were remembered, by different people, as arising from a wide variety of events. Second, although there is evidently some overlap between emotion labels—for example, as a response to death, both sorrow and distress were felt, and social events gave rise to both surprise and excitement—overall, there were distinctions made between apparently similar emotions. Thus, presents may occasion surprise but rarely excitement, and birth may give rise to joy but not often to ecstasy. A good example of this distinction is that rather different situations gave rise to shame and embarrassment. Moreover, respondents were much more frequently unable or unwilling to recall a time of shame than to recall one of embarrassment.

Third, most respondents recalled a time when they had experienced each of the emotions, including shame and ecstasy. However, the interpretation of the “not recalled” responses is problematic. It seems likely that some form of censorship is responsible for the failure to recall shaming or lustful moments, but the failure to recall distressing or ecstatic experiences may be due, as is suggested by the remarks of some of the respondents themselves, to definitional difficulties or even to a genuine belief that the emotion had never been experienced.

Table 2 gives information about the percentage of emotional events falling into particular categories. The first three columns show the time of life whence the emotion

was recalled, broadly categorized into childhood (until the respondent had left school), adult, or very recent (occurring in the preceding month). Overall, most remembered events had occurred during adult life for all of the emotions, and generally more than 1 month before the interview. A chi-square test showed a statistically significant relationship between the remembered time of occurrence of the event and whether the emotion was positive or negative [$\chi^2(2) = 27.2, df = 2, n = 913, p < .01$]. Unpleasant emotions from childhood, particularly shame, were more likely to be recalled than were pleasant ones.

Most of the events recalled were of specific incidents, that is, ones that had occurred on particular occasions—for example, the birth of one’s first child or the death of a particular person—rather than of incidents that were of a more general nature or ones that were repeated, or *repisodic* (Neisser, 1981)—for example, a childhood fear of the dark or making love with one’s boyfriend. Negative experiences were significantly more likely to be specific than were positive ones (binomial test of proportion, $z = 7.09, p < .01$): *lust, ecstasy, and excitement* seemed most likely to invoke memories of general or repeated experiences.

Emotions were sometimes felt empathetically (e.g., one might be afraid because of danger to another person rather than because of danger to oneself). Empathetic experiences, too, were more likely to be negative ones ($z = 2.90, p < .01$), although, as Table 2 shows, it was overwhelmingly one particular negative emotion—disgust—that was empathetically experienced; all the other emotions were generally felt personally.

The final two columns of Table 2 show the proportion of experiences that included a description of a behavioral response (e.g., hitting someone in anger) or a physiological response (e.g., shaking with rage) on the part of the respondent. Both kinds of response were significantly more likely to be recalled in connection with negative than with positive emotions (test of proportion: behavioral response, $z = 5.36, p < .01$; physiological response, $z = 2.11,$

$p < .05$), and again it is apparent that there are considerable differences between the individual emotions. A behavioral response was most likely to be recalled from a time of anger; a physiological response was most likely to be recalled from a period of fear. These differences, however, are less striking than the general finding that neither behavioral nor physiological responses were very likely to be recalled as part of *any* emotional experience.

Cross-tabulation of the different results by age group and sex did not reveal any important age or sex differences. A separate analysis was undertaken with the "not recalled" responses, but this likewise did not suggest that either sex or younger or older respondents were more or less likely to recall emotional experiences.

DISCUSSION

The present results suggest that the most important remembered sources of emotion are the beginning and ending of social relationships. Such experiences were recalled in response to two-thirds of the emotion stimulus words. These were followed in importance by birth and death, clearly occasioning positive and negative emotional reactions, respectively. Thereafter, the types of event to be recalled with greatest frequency concerned sex, violence, illness, work, sport, examinations, and travel. The characteristic shared by all of these categories of event is change. An individual's remembered significant emotion-evoking events mainly concern times of change in his or her life. There were very few periods of stability or lack of change that were recalled as times of emotional experience. This accords with Mandler's (1984) view of emotion as being dependent on the interruption of behavior, and with the application of Mandler's viewpoint by Berscheid (1983) to the interruption of enmeshed chains of behavior in close relationships.

The categories of incident reported resemble those most frequently found by Robinson (1976)—accidents and injuries, romantic episodes, and first experiences—but differences in procedures, categories, and subject population preclude a more detailed comparison. Perhaps of greater theoretical importance is Robinson's suggestion that remembering an emotion entails the mental reconstruction of the objective circumstances of the event. This suggestion is very strongly supported in the present studies: Respondents' statements almost invariably consisted largely of brief descriptions of the remembered objective circumstances of incidents.

The relative infrequency of descriptions of physiological states is interesting both for theoretical reasons, since some theorists (e.g., James, 1884) have suggested the primacy of physiological states in emotional experience and because it is a point of difference between our results and those of Shaver et al. (1987), in which physiological states formed a part of the emotional prototype. The difference in results is probably attributable to the fact that Shaver et al. (1987) specifically requested physiological state descriptions from their subjects. Our results, however, suggest that neither physiological state nor behavioral response is remembered as a necessary, core part of the emotional experience.

The present results suggest that respondents distance themselves from the more unpleasant emotions. Proportionally more respondents recalled

unpleasant, negative emotions from their childhood, and the pleasant, more positive emotions from more recent times, either during their adult years in general or within the preceding month in particular. In the extreme, the experience of shame was almost entirely recalled from childhood, indicating that adults either have ceased to experience it or found the memory too painful to be either accessible or recountable. As a whole, the results are in reasonable agreement with the hypothesis of repression (Davis, 1987; Davis & Schwartz, 1987).

Our respondents mainly recalled specific incidents rather than general or *episodic* events. This accords with previous research (e.g., Williams & Broadbent, 1986; Williams & Dritschel, 1988) on normal subjects. However, we did not find positive recalled experiences more likely than negative ones to be of specific incidents.

As well as producing results relating to autobiographical memory of emotion, the present paper demonstrates the efficacy of using sympathetic friends to conduct interviews about the emotional experiences of respondents. In general, respondents were willing to discuss these experiences under most of the emotion labels presented to them.

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