‘Quantifying’ qualitative data: an illustrative example of the use of Q methodology in psychosocial research

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This article focuses on an application of Q methodology (QM) to an applied area of psychological research. It constitutes a complementary sequel to a recent paper in these pages by Watts and Stenner (2005), and outlines how QM can be used to identify patterns and themes in interview transcripts, fieldnotes or naturalistic observation, as a complementary alternative to other qualitative analytic methods. QM was devised by William Stephenson in the 1930s, after he developed considerable misgivings over what he saw as the almost exclusively positivist leanings of psychological research methodology at the time (a trend which, arguably, has only been challenged relatively recently). QM is now increasingly seen by some research psychologists as providing an innovative approach to qualitative analysis, by strengthening conceptual categorization through the quantification of patterned subjectivities, using Q sorts. Although QM deploys factor analysis, the mathematics of which is complex, it is a ‘user-friendly’ method and requires no knowledge of mathematics to interpret the data obtained. Key theoretical constructs of QM are first outlined and then illustrated with an example from a relatively undiscovered area of attachment theory: later-life filial relationships between adult children and their aging parents. Six factors emerged in line with contemporary attachment-based research predictions about attachment security and insecurity. Qualitative Research in Psychology 2006; 3: 147–165

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Introduction

Q methodology (QM) offers ‘one of the very first “alternative” methods to have been developed in the context of psychology’ (Watts and Stenner, 2005: 68). In their recent paper in these pages, Watts and Stenner (2005: 67) outlined clearly and cogently some of the ‘common misunderstandings and misinterpretations’ surrounding QM. The authors pointed out early on, however, that ‘our primary intention is not to produce a “how to do it” guide’. This article focuses on the application of QM to an applied area of psychological research, and in that sense acts as a complementary sequel to the Watts and Stenner paper.

In most qualitative studies, the use of exhaustive textual analytic techniques and procedures is usually required in order to generate conceptual constructs from interview transcripts. QM offers an alternative way, for qualitative researchers, of exploring ‘the subjectivity involved in any situation e.g. in aesthetic judgement, poetic interpretation, perceptions of organizational life, political attitudes, appraisals of health care, experiences of bereavement... etc;’ (Brown, 1996: 561).

QM is used routinely in qualitative research in political science (eg, Gillespie, 1993), public policy (eg, Durning and Osuna, 1994), cultural theory (eg, Goldman and Emke, 1991) and women’s studies (Gallivan, 1994). It is also often discussed and used in conjunction with other qualitative methods, including discourse analysis (Dryzek, 1994) and feminist epistemology (Febraro, 1995). Until fairly recently, however, QM was relatively unknown in psychological research, other than in specific applications in areas such as child psychology (Taylor et al., 1994), psychoanalysis (Edelson, 1989), and narrative analysis in psychology (Felkins and Goldman, 1993). Indeed, notwithstanding a chapter written by Stainton Rogers (1995), QM is conspicuously absent from most textbooks devoted to research methods used in psychology; and, as Watts and Stenner (2005: 68–69) argue persuasively, those that do include QM tend to misinterpret it.

This oversight is surprising, partly because Stephenson was a prominent psychologist, but, as Brown (retrieved 26 August 2004) argues, from the inception of QM, ‘adherence to an outdated Newtonianism plus concern for psychometric assessment led British psychology to embrace R methodology’ (ie, traditional correlational research) ‘and to miss Q’s... implications for a science of subjectivity’ (p. 1).

At its simplest level, QM is a research tool capable of augmenting existing qualitative analytic techniques aimed at identifying patterns and themes in interview transcripts, fieldnotes or naturalistic observation. Although QM deploys factor analysis, the mathematics of which is complex, it is a remarkably ‘user-friendly’ method and requires no knowledge of mathematics to interpret the data obtained.

As its name implies, however, QM is not simply a research ‘method’. To elaborate a little upon its epistemological foundations, I first outline the central theoretical constructs underpinning QM and then discuss how, even though as a method it relies upon a statistical technique to identify relationships within data, its centre of gravity is clearly qualitative in nature (Brown, 1996; Dryzek, 1994). I then illustrate the use and strengths of QM by drawing upon a QM study into adult children’s attachments towards their ageing parent.
Theoretical principles of Q methodology

Because of its reliance on factor analysis, QM is sometimes associated with quantitative methods – indeed QM’s qualitative features render it a ‘highly unusual qualitative research method’ (Watts and Steen, 2005: 69). But its originator, William Stephenson – originally a colleague of Cattell, Spearman and Thurstone, the pioneers of the British factorist tradition – developed QM in direct opposition to the positivist assumptions underpinning traditional correlational research (denoted by ‘R’, the symbol used for correlation coefficients). He explains part of his disquiet as follows: ‘the correlation and factor analysis of scale responses leads not to a taxonomy of behaviour as commonly thought, but to a taxonomy of tests’ (Stephenson, 1953). Brown (1980) expands this point by using Stephenson’s example of a physicist who, when noting a high correlation between the measurement on a watch and the clock on the wall, was ‘quite wrong in assuming that “time” was being measured – it is simply that their mechanisms have been constructed in virtually identical ways’ (Brown, 1980: 5).

Stephenson was interested in ‘life as lived from the standpoint of the person living it that Q methodology is designed to examine and that frequently engages the attention of the qualitative researcher interested in more than just life measured by the pound’ (Stevenson, 1953: 561). Although now seen as firmly connected with qualitative methodologies, Stevenson’s articulation of QM was seen at the time as heretical, especially as he had worked originally within the realm of psychometrics and psychological testing.

The underlying analytic principles in QM differ markedly from traditional correlational matrix analysis, ‘whereby tests are applied to a sample of people’, and instead applies ‘persons (to) a “sample” of statements … In Q-methodology it will be the “persons”, or, more accurately, their action upon a sampling of elements, which will be correlated and subsequently factored’ (Stainton Rogers, 1995: 179).

To illustrate the difference between the ‘R’ and ‘Q’ paradigms, Brown (1980) used an example of a number of individuals who were compared according to 25 physical characteristics (all measured in inches) including total overall height, size of waist, width of palm, foot length, etc. By comparing all pairwise correlations, traditional, ‘R’-based factor analysis identified eight statistically significant different clusters (‘factors’) of connected characteristics among the data. For example, one of the factors showed a strong association between thigh size and hip size, another between chest and waist sizes (but not between thigh size and waist size). Thus, traditional factor analysis:

breaks up a phenomenon … into separate components … (but) … it is left to the investigator, like a modern-day Frankenstein, to stitch the phenomenon together again, and so it can be seen at once that the researcher’s subjectivity is of necessity deeply involved in the synthesizing stage of R methodology. Clearly, if the form of the human body was not a part of one’s experience, it would be virtually impossible to construct a recognizable model using the information from the R matrix. (Brown, 1980: 14)

To compare individuals, and not their measurements, Stevenson transposed the matrix and then refactored the data. Now, only one factor was found and it accounted for >99% of the variation across the sample, thereby indicating a ‘species factor, the bodies of human beings being proportionately about the same’ (Brown, 1980: 14).
To explore more fully his notion of ‘participant subjectivity’, Stephenson developed the research technique known as Q-sort, a method now used widely in psychological research (although subsequent analysis is not always based upon QM). Q-sort procedures ask individuals to rank-order important aspects of a phenomenon – written in cards – according to bipolar opposites which explore individual subjectivity, such as ‘most like me’/‘least like me’.

**An illustration of QM in a psychological field: attachment theory and later-life filial relationships**

An example from attachment theory is now used to illustrate the use of QM in practice. The central research question was: How do adult children internally represent their past, present and future attachment relationships with the parent to whom they feel closest? Adult attachment theory proceeded from pioneering work on infant development by Bowlby (1979; 1988), Ainsworth *et al.* (1978) and Main *et al.* (1985), firstly into adolescence and then accelerating dramatically when the focus shifted to the study of close relationships in adulthood. A diverse literature now exists (see Cassidy and Shaver, 1999, Feeney and Noller, 1996 and Sperling and Berman, 1994 for comprehensive summaries) which explores topics such as parenting and conflict in relationships, as well as specific topics, such as mental health and working with loss and separation. Attachment in adulthood is different from attachment relationships in childhood because they are bidirectional, in the sense that either party will give and receive support. Adult attachment theory and research differentiates individual close relational styles (Main *et al.*, 1985), emotion regulation (Feeney, 1995) and information processing (Fraley and Shaver, 1997) into one of three attachment organizations or ‘styles’: the ‘secure’, ‘avoidant’ and ‘ambivalent’ attachment organizations (Bowlby, 1979; 1988). A QM study focusing on attachment dynamics and subjectivities should, therefore, produce factors conforming to the three attachment styles.

Participants were selected randomly from among health and social care professionals attending post-qualification training. Although this is a biased sample, attachment styles are considered to reflect universal behavioural characteristics and, hence, are relatively unaffected by occupational grouping. The only restrictions placed upon participants was for the parent selected to be a surviving birth-, adoptive or step-parent, and that s/he was part of the son’s/daughter’s primary caregiving system as a young child. Volunteers were recruited in this way until a cohort of 24 individuals, containing an equal number of the secure, avoidant and ambivalent attachment organizations, was identified by administering the Attachment Style Questionnaire (ASQ: Feeney *et al.*, 1994). Participants’ ages ranged between 41 and 57 (M = 48.6); the selected parent was aged between 64 and 83 (M = 76.8). Two men took part and seven of the 24 adult children chose to talk about their relationship with their father; consequently, for the most part, the study is about attachments between daughters and their mothers.

**Generating a ‘Q sample’**

The first step in QM is to obtain a topic-specific set of statements to form the basis of subsequent Q Sorts. This is the Q sample, defined by McKeown and Thomas (1988: 25) as ‘a collection of stimulus items that is presented to respondents for random-ordering in a Q-Sort’. McKeown and Thomas (1988) distinguish between ‘naturalistic’ and ‘ready-made’ Q samples. **Naturalistic**
(ie, real-world communication contexts) Q samples include interviews and written narratives. For example, Goldman and Emke (1991) looked at 30 previous issues of a Canadian daily newspaper to find examples of discourse containing ‘Canadian identity formation’. A ready-made Q sample, on the other hand, might consist of items taken from conventional rating scales or questionnaires. McKeown and Thomas (1988) also contrast ‘structured’ Q samples, whereby attempts are made to include sub-topics in a systematic way, with an ‘unstructured’ Q sample, where no attempt is made to constrain or restrict statement content.

As no ‘ready-made’ sample of statements existed concerning later-life filial attachments, a ‘naturalistic’ sample was devised, but ‘structured’ around four themes:

1) the quality of the current relationship
2) the nature and amount of contact
3) thoughts about the relationship in the past
4) thoughts about the relationship in the future

To begin with, 100 statements were selected from five in-depth pilot interviews, as well as from the relevant literature. Statements considered by pilot respondents to be ambiguous or repetitious were then rejected or reworded. This process reduced the number to 54. At this stage, they were used in three pilot Q-sorts, which resulted in the removal of a further 10 statements, because they contained overlaps between the four themes.

To avoid arithmetically ‘cancelling out’ one statement with another, it is important not to attempt to balance a ‘positive’ rendition of statement with a ‘negative’ version. Differences in generalizable attitudes are obtained, not by ‘statement balancing’, but by ensuring that each statement is deliberately worded in a polarized manner – eg, ‘I don’t think I would miss my mother if I never saw her again’ – in order to facilitate the sorting process. In some cases, the wording appears to be similar, as in numbers 38 and 41, for example:

38. I’d love my mother to get closer to me but I don’t think that will ever happen and it makes me feel sad

41. I’d love one day to be able to get on better with my mother but I don’t think that will ever happen

However, the subtle differences in tone and meaning between these two statements were often reflected by them being placed in markedly different positions on the grid by participants, thereby indicating that the statements possess discriminatory power.

**The Q-sort process**

Q-sorts involve research participants arranging into predetermined grid cards (Figure 1), containing written statements saturated in meaning associated with the phenomenon under consideration – in this case ‘later-life filial attachments’.

Participants are asked to place the statements into the grid according to prespecified ‘conditions of instruction’: ‘a guide for sorting the Q sample items’ (McKeown and Thomas, 1988: 30), such as ‘What is most like/most unlike your position?’ or ‘What do you believe is most like/most unlike a conservative/liberal viewpoint?’ (In this study the ‘condition of instruction’ was ‘True for me’ and ‘Untrue for me’.) When sorting cards participants uncover their ‘internal frame of reference’ (McKeown and Thomas, 1988: 22), a concept which, in terms of attachment theory, is not unlike the ‘internal working model’ (Berlin and Cassidy, 1999).
The actual process of sorting the cards required each participant to place the 44 statements into two piles according to the ‘condition of instruction’. They were then asked to establish a third pile of ‘undecided’ cards. Next, they placed the card they felt was most true for them at the right hand end of the grid, followed by the card they felt was most untrue for them at the other end of the grid. They then continued placing the cards on the grid until all were in position. Participants’ subjective neutrality is indicated when statements are placed nearer the centre of the grid. Before finishing, participants were asked to give the array a final inspection to determine whether it represented their views accurately.

**Q methodology and ‘small’ samples**

In QM, the numbers of statements and people tend, in terms of R methodology, to be ‘small’. A regularly adduced but fundamentally naïve criticism of small-sample, qualitative research is that it simply reflects the idiosyncratic perspectives of a given group of individuals; but this overlooks the fact that ‘subjectivity and idiosyncrasy and not functional equivalents’; (thus) … ‘the purpose (of QM) is to study intensively the self-referent perspectives of particular individuals in order to understand the lawful nature of human behaviour. Specific sampling principles and techniques important in mainstream behavioural research are not necessarily relevant to person sampling in Q, given the contrasting research orientations and purposes’ (McKeown and Thomas, 1988: 17). Furthermore, in respect of the ‘single case’, ‘what science actually deals with are events, occurrences, and instances’ (Brown, 1974: 4) and therefore ‘there is no reason to argue that the study of such events cannot take place within the confines of one person’s behavioural universe’ (McKeown and Thomas, 1988: 46).

Because the 44 cards can be combined in over $10^{54}$ different ways when one person arranges the cards – a figure considerably larger than the odds against winning the UK lottery – due to the sheer size of probability that a pattern will not occur, when one does it indicates that participants are responding to the sorting task in patterned ways. When 24 individuals sort the 44 cards, the improbability is increased considerably.
Therefore, any factors that do emerge suggest the presence of robust, non-overlapping, conceptually distinct clusters of attitudinal patterns.

**Factor extraction and analysis**

Factor analysis consists of ‘statistical operations ... performed upon all paired associations to produce clusters of large correlation coefficients called factors. Because they connect with different dimensions within the same data, emerging factors are uncorrelated with each other’ (Howe et al., 2001: 348). In other words, ‘factor analysis identifies and highlights any underlying structure and patterns embedded within a set of variables’ (Howe et al., 2001: 348).

Resulting Q sorts are factor analysed using QMethod\(^1\) — a statistical software package established at the University of Munich to analyse Q-sort data, in line with the principles of QM. QMethod produces user-friendly statistical information, arranged under three headings:

1. **Correlation matrices of Q-sort factor loadings and of scores between factors**

   Initial analysis reveals an individual’s degree of concordance, or *loading*, with each factor: ‘an individual’s positive loading on a factor indicates his or her shared subjectivity with others on that factor; negative loadings, on the other hand, are signs of rejection of the factor’s perspective’ (McKeown and Thomas, 1988: 17). The higher an individual’s loading on each factor, the more they represent and typify that factor.

   Because, as stated above, in QM it is ‘persons’ who are correlated and factored, it is the individuals typifying each factor who are investigated further. Six statistically significant factors were extracted from the data. A total of 20 participants (83%) loaded onto one of the six factors (no one loaded on more than one factor, thereby suggesting a degree of ‘factor independence’). The percentage variation accounted for by the six factors was 71%, which, from a statistical perspective, is a high figure.

2. **Normalized factor scores**

   Provided in the QMethod printouts are detailed tabulations of the statements which most and least typify each of the six factors. They are presented as z scores (which re-express each statement in terms of its distance away from the mean, measured in standard deviations). Hence, statements with z scores over 1.5 — and certainly above 2.0 (which incorporate over 95% of scores) — are seen as the most powerful exemplars of each factor. Another way of looking at this is to consider the statements with z scores nearest to zero as those placed at the centre of the grid, whereas the highest positive and negative z scores represent the statements placed at the far ends.

   When interpreting z scores, statements need to be considered conjointly, rather than individually: it is the particular configuration of statements *together* that create the nuanced ‘meaning’ for each factor. Trying to take account of all 44 statements so that the particular order of arrangement defining each factor remains intact, is virtually impossible. Consequently, QMethod concentrates upon the greatest positive and negative z scores (i.e., those furthest from the mean).

3. **Distinguishing statements for each factor**

   QMethod provides details, for each factor in turn, of the statements which are statistically most different and then compares the
rank of those statements in respect of each factor. So, for example, one of the most distinguishing statements for Factor 1 is ‘I can be myself with my mother’. The respective ranks (from −6 to +6, i.e., the range used on the grid) for each factor are as follows:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>6</td>
</tr>
<tr>
<td>Factor 2</td>
<td>0</td>
</tr>
<tr>
<td>Factor 3</td>
<td>−4</td>
</tr>
<tr>
<td>Factor 4</td>
<td>3</td>
</tr>
<tr>
<td>Factor 5</td>
<td>3</td>
</tr>
<tr>
<td>Factor 6</td>
<td>2</td>
</tr>
</tbody>
</table>

Thus ‘I can be myself with my mother’ most typified Factor 1 and least typified Factor 3. As with z-scores, distinguishing statements need to be considered as a whole rather than separately. If there is ambiguity or confusion when reading the strongest positive and negative statements, proximal statements are searched to investigate the data more carefully. For example, when interpreting Factor 6, it emerged that ‘sadness’ was a feature informing the way participants were sorting the cards, but the precise nature of the ‘sadness’ was unclear. A search through the remaining list of z-scores revealed that the statement ‘I feel guilty about my feelings towards my mother’ (statement 14) was high in the list. Thus, it was eventually decided that ‘remorse’ captured the sentiment better than ‘sadness’.

QM Method also produces the ‘factor array’ for each of the 44 statements, by which the researcher can examine how each statement is characterized by each factor in turn (for the complete factor array and list of statements see Table 1).

The way QM was used to derive and expand each factor is now illustrated by focusing upon Factor 3.

Using the Qsorts to identify factor constructs – emerging internal representations for Factor 3 (avoidant – Distant Irritation)

Factor 3: Q-sort analysis
The three highest and lowest z-scores for Factor 3 were as follows (negative renditions of the statement are indicated in italics):

Strongest positive statements:

- My mother really irritates me most of the time \( (z = 1.935) \)
- I really dislike being with my mother for any length of time \( (z = 1.612) \)
- I have very little contact now with my mother and that’s the way I prefer it \( (z = 1.612) \)

Strongest negative statements:

- There’s almost nothing \(^2\) my mother and I have left to give to each other \( (z = −1.782) \)
- I have virtually no happy memories as a child with my mother \( (z = −1.766) \)
- The thought of being without my mother does not make me sad \( (z = −1.612) \)

After interpreting the distinguishing statements, a distinct picture of irritation emerges, with few regrets about how things have turned out. Nevertheless, it appears that the situation has been accepted in this way by the adult child and there are indications that the participant does not welcome any change. It is unclear whether the participant is left with unresolved feelings. For example, a participant loading on Factor 3 has ‘very little contact . . . and that’s the way I prefer it’ (statement 27) because ‘I
Table 1 List of statements and factor array.

<table>
<thead>
<tr>
<th></th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. As we’ve got older my mother and I have got closer</td>
<td>1</td>
</tr>
<tr>
<td>2. I can be myself when I’m with my mother</td>
<td>6</td>
</tr>
<tr>
<td>3. My mother has always given me a hug when we see each other</td>
<td>-1</td>
</tr>
<tr>
<td>4. I can talk about almost anything with my mother</td>
<td>4</td>
</tr>
<tr>
<td>5. I enjoy the time I spend with my mother</td>
<td>6</td>
</tr>
<tr>
<td>6. I miss my mother when we’ve not been in contact</td>
<td>0</td>
</tr>
<tr>
<td>7. My mother and I rarely argue</td>
<td>3</td>
</tr>
<tr>
<td>8. The things my mother and I do now together will leave me with many happy memories</td>
<td>5</td>
</tr>
<tr>
<td>9. I really respect and admire my mother as a person</td>
<td>4</td>
</tr>
<tr>
<td>10. The relationship I have with my mother is a very equal one</td>
<td>2</td>
</tr>
<tr>
<td>11. There seem to be quite a lot of things that are left unresolved between my mother and myself</td>
<td>-3</td>
</tr>
<tr>
<td>12. My mother really irritates me most of the time</td>
<td>-2</td>
</tr>
<tr>
<td>13. My mother rarely shows any physical affection towards me</td>
<td>1</td>
</tr>
<tr>
<td>14. I feel guilty about my feelings towards my mother</td>
<td>-4</td>
</tr>
<tr>
<td>15. I really dislike being with my mother for any length of time</td>
<td>-3</td>
</tr>
<tr>
<td>16. I can’t have a conversation with my mother because she never really listens to what I say</td>
<td>-2</td>
</tr>
<tr>
<td>17. I’d never try and talk to my mother about a personal problem because she doesn’t understand</td>
<td>-2</td>
</tr>
<tr>
<td>18. My relationship with my mother seems quite fragile and I get quite worried about it</td>
<td>-5</td>
</tr>
<tr>
<td>19. My relationship with my mother has deteriorated over the years</td>
<td>-5</td>
</tr>
<tr>
<td>20. Whenever I contact my mother she usually manages to upset me in some way</td>
<td>-2</td>
</tr>
<tr>
<td>21. Both my mother and I are comfortable with the amount of contact we have with each other</td>
<td>0</td>
</tr>
<tr>
<td>22. If my mother became dependent I’d be happy to have her live with me</td>
<td>1</td>
</tr>
<tr>
<td>23. If my mother became dependent I’d be happy to do whatever I could to help pay for her care</td>
<td>3</td>
</tr>
<tr>
<td>24. I don’t contact my mother as much as I’d like but that’s only because there’s always other things which compete for my time</td>
<td>0</td>
</tr>
<tr>
<td>25. My mother and I rarely bicker about who contacts who first</td>
<td>1</td>
</tr>
<tr>
<td>26. I stay in contact with my mother more out of duty and a feeling of obligation than anything else</td>
<td>-6</td>
</tr>
<tr>
<td>27. I have very little contact now with my mother and that’s the way I prefer it</td>
<td>-5</td>
</tr>
<tr>
<td>28. I’m OK about the amount of time I see my mother... but she’s not</td>
<td>0</td>
</tr>
<tr>
<td>29. I often help my mother with household chores etc. but I really resent doing it</td>
<td>-1</td>
</tr>
<tr>
<td>30. I find it a burden to keep in contact with my mother</td>
<td>-4</td>
</tr>
<tr>
<td>31. I never really worry about my relationship with my mother in the future</td>
<td>5</td>
</tr>
<tr>
<td>32. The thought of being without my mother makes me sad</td>
<td>5</td>
</tr>
<tr>
<td>33. I would say there’s no ‘unfinished business’ between my mother and me</td>
<td>4</td>
</tr>
<tr>
<td>34. There’s still a lot more my mother and I have to give to each other and I’m sure we will</td>
<td>2</td>
</tr>
<tr>
<td>35. By and large there’s nothing I’d like to change about my relationship with my mother</td>
<td>3</td>
</tr>
<tr>
<td>36. I have so many happy memories as a child with my mother</td>
<td>2</td>
</tr>
<tr>
<td>37. As I child I always felt loved by my mother</td>
<td>2</td>
</tr>
<tr>
<td>38. I’d love my mother to get closer to me but I don’t think that will ever happen and it makes me feel sad</td>
<td>-1</td>
</tr>
</tbody>
</table>
really dislike being with my (parent) for any length of time’ (statement 15).

With Factor 3 there also appear to be no negative thoughts or feelings centred around anticipatory loss on the part of the adult child: ‘The thought of being without my mother does not make me sad.’ This noticeable emotional distance, mixed with the experience of being with their parent as annoying, led to Factor 3 being labelled Distant Irritation.

The use of the Adult Attachment Interview as a complementary research instrument

As Watts and Stenner (2005: 71) point out, QM ‘does not deal with participants’ own discourse’. To bridge this gap, and to add richness to the Q data, the Adult Attachment Interview (AAI; George et al., 1996) was also used in the study. The AAI is used regularly in attachment-based research because of its sound reliability and validity characteristics (Hesse, 1999). The AAI is a complex interviewing process, designed to elicit working models of attachment. Specifically,

the 60- to 90-minute interview asks interviewees to choose five adjectives to describe their relationship with their mother/father, to supply anecdotes illustrating why these adjectives are appropriate, to speculate about why their parents behaved as they did, and to describe changes over time in the quality of their relationships with their parents... (Shaver and Mikulincer, 2002: 136)

The AAI includes detailed guidelines on how the researcher should approach the interview (eg, how to handle silence). Because ‘the AAI indicates defensive strategies... more emphasis is placed on discourse properties... than on the propositional content of what is said’ (Shaver and Mikulincer, 2002: 136).
Hesse (1999) remarks that the central task for participants responding to the AAI is one of (i) producing and reflecting upon memories related to attachment while simultaneously (ii) maintaining coherent ... discourse with the interviewer. (Hesse, 1999: 397)

In accomplishing these tasks, considerable differences emerge between different individuals depending upon their attachment organization. Secure people, for example, are able to produce 'an acceptably coherent and collaborative narrative, whether experiences are reported as having been favourable or unfavourable' (Hesse, 1999: 397). Interviews are viewed as representative of an avoidant attachment organization when discourse appears aimed at minimizing the discussion of attachment-related experience. Typically, these transcripts violate coherence in that they are internally inconsistent, while responses are often excessively terse (eg, 'I don't remember'). Descriptions of parents are most often favourable to highly favourable. Unlike secure individuals utilizing similar descriptors, however, those classified as [avoidant] fail to provide supportive evidence for these global positive representations, and not infrequently contradict them. (Hesse, 1999: 397)

On the other hand, an individual with an ambivalent attachment organization is unable to maintain a focus or to contain his or her responses to a given question. In many cases, therefore, the memories aroused, rather than the intent of the question itself, appear to guide the subject's speech ... this is evidenced in lengthy, angry discussions of childhood interactions with the parent(s), which may inappropriately move into the present tense ... [they] may also digress to remote topics, use vague language, and on occasion oscillate regarding their view of a parent several times in the same sentence. (Hesse, 1999: 397)

Returning to Factor 3, the AAI transcripts contained many instances of this internal representation of the relationship with an ageing parent. To illustrate how the transcripts complemented QM, some excerpts are presented and discussed. The richness contained within the transcripts added much to the Q-sort data, particularly from the way speakers tended to defensively exclude powerful feelings about their parent: on the surface the relationship was spoken about in terms of 'distant irritation', but the texts also revealed many examples of 'unfinished business', often laced with regret and a desire to repair the relationship.

**Factor 3: AAI transcripts examples of Distant Irritation**

Valerie's and her mother:

We will never be close; she thinks we are, but I don't feel close to my mother

The five adjectives or short phrases Valerie used to describe her relationship with her mother were: 'strict', 'concerned about what she would say', 'wary of her', 'didn't like to upset her' and 'she can't do anything wrong'. When she was asked subsequently to think about her earliest memories and to give examples of how each of these phrases captured her relationship with her mother, Valerie's internal representation of the relationship was of an emotionally undemonstrative parent who was somewhat fierce when bringing up children. Valerie said she was shown little comfort or affection when she was ill as a child, and that she could not remember having been cuddled or hugged, a point made using the superlative qualifiers 'ever' and 'at all':

I can't ever remember ever going home to my mum and saying 'I've been hurt', or her comforting me at all.

Can you remember being hurt?

Yes ... I don't remember any instances when I would have gone to my mum though ... I would probably sort it out myself.
Valerie’s feelings towards her mother include some of the possible early sources of both her emotional distance and irritation towards her mother:

Mum was very strict so you were very… I dunno, dunno what the word would be really… are ‘aware’ of her or you always sort of were concerned about what mum would say. You’re always worried about getting into trouble I think… erm… yeah, I suppose you were wary of her. I think also you didn’t upset mum, you didn’t want to upset, in the sense that… you didn’t like to upset her… and er… er… I think we… I’m trying to think of the word really… it’s when your mum can’t do any wrong… it’s as if… yeah I don’t know how to describe it really, yeah it’s where she can’t do any wrong.

The irritation, coldness and annoyance that Valerie currently felt towards her mother can be heard as masking painful feelings which are indicated from the discourse at numerous points. Firstly, in addition to the use of the impersonal pronouns ‘you’ and ‘we’ to distance the self, and the appearance of dysfluence, when she considers her mother’s reaction to her misdemeanours. A striking feature of Valerie’s narrative is the way she uses silence to transform affect, but it is used to ‘gain time’, rather than for reflection (Crittenden, 1996). Crittenden makes the point that avoidantly attached ‘speakers usually try to cover their lack of episodic detail with a semantic description… It should be noted that the pattern of being unable to recall certain things and showing dysfluence around the missing information is itself evidence that the speaker is vigilant regarding this information’ (Crittenden, 1996: ch. 4: 10). Crittenden contrasts this with the use of silence by ambivalent speakers, on the other hand, who ‘sometimes use silence obstructively or seductively; this is usually in response to negative semantic probes’ (ch. 4: 9). The regularity and nature of the silences suggest that Valerie experiences palpable internal tension when contemplating her relationship with her mother. But she appears to be at pains to create the impression that none of this now matters.

Turning to another participant who also loaded heavily onto Factor 3, Linda, a similar pattern emerges. As with Valerie, on the surface Linda’s feelings mostly centre on irritation. But because the AAI is primarily a device to explore how narrative and discourse contain clues about the attachment organization of the speaker, embedded within the transcript are important signals about repressed or denied feelings. Although Linda uses ‘distant’ and ‘irritation’ to describe her relationship with her mother, at regular intervals during the interview, these adjectives suggest something more complex. There certainly appeared to be ‘unfinished business’ between them, one possible marker being the fact that Linda volunteered to take part in the research, for here is a potential inconsistency: Linda portrays her relationship with her mother as ‘distant’, almost to the point of non-existence, and she says she finds her ‘irritating’, but she nevertheless volunteers to take part in a research study exploring filial attachments, knowing that it will involve an in-depth interview about her past, present and future relationship with her mother. Furthermore, at another point in the interview, she announces, almost in a vacuum, ‘I’ve started doing a family tree of my past’; and later, she replies to a question about whether her mother had ever met Linda’s own children – before they ceased contact 16 years ago – with ‘Yes. When I had my own children, I thought “Well I’ll give the old cow one more chance”.’ Equally noteworthy was the observation that each of these responses was
expressed dispassionately in an ‘I’m-OK-about-all-this’ tone.

The remaining five factors

The process described for the explication of Factor 3 was undertaken on the remaining five significant factors, which resulted in the following conceptual categories.

**Factor 1: Q-sort analysis**

Participants loading onto Factor 1 felt they were loved as children and positive feelings were apparent, both when the past was remembered and the present contemplated. They enjoy being in their parent’s company, and they feel comfortable talking to them. Little appeared to be unresolved from the past and the relationship was experienced as having improved over time. They considered that the statement ‘The things my mother and I do now together will leave me with many happy memories’ best represented the relationship with their parent, which was perceived by the adult child as reciprocally and mutually rewarding. From their placement of the statements on the grid, they all indicated that they would feel sad without their parent around, but there was already a feeling redolent of closure: of things, on balance, having ‘worked out well’. Consequently, Factor 1 was labelled *Confident Resolution*. This internal representation of their attachment to a parent produced creative, ‘other’-related ways of conceiving actual (or potential) caregiving scenarios.

**Factor 2: Q-sort analysis**

Here, a different narrative emerged. Participants felt unable to talk to their parent about personal concerns and the relationship is infused with anxiety and fuelled by guilt – ‘I feel guilty about my feelings toward my mother/father’ was placed high on the grid. But a parallel message existed, whereby a sense of duty and personal responsibility was experienced regarding future care needs, with participants indicating a strong preference for paying for their parent’s care if it were needed later, rather than providing for it directly or personally. A distinct impression of powerful feelings simmering under the surface was palpable during and after the Q-sort. Participants also indicated that there was little physical contact between their parent and themselves. On the basis of this composite description, Factor 2 was termed *Dutiful Loyalty*. It suggests, however, a compliant and wary obedience, masking the denial or repression of powerful feelings, rather than dedication and fondness.

**Factor 4: Q-sort analysis**

The positioning of the statements gave an impression of significantly unresolved feelings. The highest positive score was over two standard deviations away from the mean and referred directly to unresolved feelings about the past: ‘When I was a child I never knew whether or not my mother loved me’ ($z = 2.236$). Additionally, the message conveyed in the two statements ‘I can talk about very little with my mother’ and ‘My mother and I often argue’ suggests disharmony. Along with – ‘The thought of being without my mother makes me sad’ – a sense of the adult child wanting the relationship to improve was strongly represented. With Factor 4, an appropriate description was *Unresolved Yearning*.

**Factor 5: Q-sort analysis**

The strongest statements from the Q-sort defining Factor 5 comprised ideas about: wanting to get closer but feeling sad that this would not happen; enjoying the time spent with the parent and knowing that s/he
will be missed; the relationship not having deteriorated over the years; and not staying in contact merely out of duty. Consequently, Factor 5 was referred to as *Resolved Yearning*.

**Factor 6: Q-sort analysis**

A sense of two different but complementary emotions being expressed became clear: *hostility*, as in 'I feel angry with my mother for not being the parent she should have been when I was a child', and a certain *emotional disarray*, as evidenced by 'Whenever I contact my mother she usually manages to upset me' combined with 'I would say there is much “unfinished business” between my mother and me'. At first sight Factor 6 resembles Factor 4 (*Unresolved Yearning*), but it emerged that 'being angry that their parent was not all they should have been’ was very strong within Factor 6, but weak in Factor 4. Similarly, comparing Factor 6 with Factor 4 over the extent to which the adult child missed their parent, the views represented by Factor 4 and 6 were diametrically opposed, with participants loading on Factor 6 experiencing considerable animosity. Due to the absence of happy childhood memories, coupled with a perceived lack of equality in the relationship, Factor 6 was termed *Entangled Resentment*.

**Consensus and disagreement**

*QMethod* allows for the data as a whole to be analysed in terms of features that link or separate the Q sorts, thus indicating the extent of overall consensus (or, alternatively, disagreement). The major finding from this part of the analysis was that whilst some statements achieved more consensus than others – which is inevitable, given a Q sort of 44 statements – none of that consensus was statistically significant. On the other hand, five statements of disagreement were identified, each of which was statistically significant at $P < 0.05$ (see Table 2). There is a striking similarity between these five statements and the main themes identified within attachment-based research, particularly concerning how people handle conflict, stress and emotion.

Taking each of the five statements in Table 2 in turn the data suggest that, firstly, individuals are likely to differ quite markedly over the extent to which they experience anticipatory losses. Secondly, although ‘unfinished business’ was prominent in all participants’ Q sorts, there are likely to be differences in both nature and quality, depending on the adult child’s attachment organization. Thirdly, there appear to be marked differences in the extent of actual and perceived physicality between parents and their adult children, although, for some, this appears to have been a feature of their relationship as far back as participants could remember. Fourthly, not only do adult children differ over the extent of ‘unfinished business’ between themselves and their parent, they also vary in the extent to which they would like to resolve this and how they will feel if they do not. Lastly, individuals vary considerably about whether they actually like being in the presence of their parent for any length of time.

Again in line with attachment theory, the ‘positive’ rendition of these statements – I love spending time with my mother/father, because we are emotionally close; we can resolve any unfinished business between us; we give each other a cuddle when we need to; and I would be really sad if s/he were not around – were far more likely to be the experience of those adult children.
experiencing *Confident Resolution* and, albeit to a slightly lesser extent, *Resolved Yearning* with a parent during later life.

**Checking factor reliability**

Watts and Stenner (2005) make the generally valid point about QM that it ‘makes no claim to have identified viewpoints that are consistent within individuals across time’ (original emphasis, p. 85). Within attachment research, however, there are strong indications that attachment organization shows signs of temporal stability (see Bretherton and Mulholland, 1999; van Ijzendoorn and Bakermans-Kranenburg, 1997; Zhang and Labouvie-Vief, 2004). Because the six factors define distinct, non-overlapping clusters of filial attachment representations, as a consequence, participants associated with a specific fac-

<table>
<thead>
<tr>
<th>Table 2 Consensus and disagreement</th>
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<td>The five highest ‘disagreement’ statements ($P &lt; 0.05$)</td>
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1. The thought of being without my mother makes me sad  
   Dutiful loyalty = 0  
   Distant irritation = −5  
   Unresolved yearning = 6  
   Resolved yearning = 6  
   Entangled resentment = −2  

2. I would say there’s no ‘unfinished business’ between my mother and me  
   Confident resolution = 4  
   Dutiful loyalty = −3  
   Distant irritation = 3  
   Unresolved yearning = −5  
   Resolved yearning = 1  
   Entangled resentment = −6  

3. My mother has always given me a hug when we see each other  
   Confident resolution = 0  
   Dutiful loyalty = −6  
   Distant irritation = 1  
   Unresolved yearning = −6  
   Resolved yearning = 3  
   Entangled resentment = 2  

4. I’d love my mother to get closer to me but I don’t think that will ever happen and it makes me feel sad  
   Confident resolution = −1  
   Dutiful loyalty = 0  
   Distant irritation = −2  
   Unresolved yearning = 6  
   Resolved yearning = −1  
   Entangled resentment = 6  

5. I really dislike being with my mother for any length of time  
   Confident resolution = −3  
   Dutiful loyalty = −1  
   Distant irritation = 5  
   Unresolved yearning = 0  
   Resolved yearning = −4  
   Entangled resentment = 3
tor were expected to share a similar attachment organization. Comparisons were therefore made between the 20 participants loading significantly onto one of the six factors, and their scores on the 3-Factor solution of the ASQ. The 3-Factor solution comprised ‘security’, ‘avoidance’ and ‘anxiety’. They map respectively onto the original ‘secure’, ‘avoidant’ and ‘ambivalent’ attachment categories. In the present study, an exact correspondence with the three attachment classifications identified by the ASQ 3-Factor solution was obtained, with the ‘security’ factor mapping onto Confident Resolution and Resolved Yearning, the ‘avoidant’ factor mapping onto Dutiful Loyalty and Distant Irritation, and the ‘anxiety’ factor mapping onto Unresolved Yearning and Entangled Resentment. Although a sample size of 24 is more than adequate in QM, it is not possible to generalize findings to a wider population. Nevertheless, of the 20 participants loading significantly onto one of the six factors, there was an even split between those who were securely attached (ie, Factors 1 and 5) compared with those with an insecure attachment organization (ie, Factors 2, 3, 4 and 6). This relative proportion reflects contemporary attachment-based findings. For example, the largest study to date (n = 8098) found 59% were securely attached and 41% insecurely attached (Mickelson et al., 1997).

Conclusion

Watts and Stenner (2005) argue that QM does not do the ‘same job as any of the textual methods available to the psychologist’ (original emphasis, p. 70). They add that QM ordinarily adopts a multi-participant format and is most often deployed in order to explore (and to make sense of) highly complex... concepts and subject matters from the point of view of the group of participants involved... What it can do... is show us the primary ways in which these themes are being interconnected or otherwise related by a group of participants. In other words, it can show us the particular combinations or configurations of themes which are preferred by the participant group. (Watts and Stenner, 2005: original emphasis, p. 70)

I have attempted to illustrate how QM can be deployed in this way; used in conjunction with the AAI, QM uncovered a rich and detailed analysis of participant subjectivities in respect of later-life filial attachments. In the non-attachment-related theoretical and research literature, later-life filial relationships tend to be conceptualized as undifferentiated constructs. Consequently, little attention is paid to the differential nature of representational working models of relationships throughout the lifespan. The loading of a high proportion (83%) of the participants onto one of the six factors, with no overlapping correlations for any individual, suggests the possibility that they may represent coherent attitudinal clusters.

The analysis also strongly indicates that later-life filial relationships are complex psychosocial entities. The first level of differentiation appears to be between ‘secure’ and ‘insecure’ attachment organization, with the second level subdividing each of the three main attachment styles into two further categories. This builds on the finding of Feeney et al. (1994) that not only is there more than one way of being avoidant in adult close relationships, there also exists more than one way to be ambivalent. The present study suggests that there may also be more than one way to be securely
attached within later-life filial relationships.

The six differentiated factors may also help health and social care professionals reflect on their own practice with increased personal insight:

it may, for example, help explain why, seemingly out-of-the-blue, family members sometimes panic, or become unusually dismissive, or get agitated, when talking about the past, present or future. Similarly, it may also suggest why professionals are sometimes left feeling confused or angry: the attachment behaviour of family members often primes that of the professional, a tendency likely to be exacerbated under stressful conditions. (Shemmings, 2004)

Finally, it was particularly noticeable in this study that no participant unambiguously or unequivocally ruled out the possibility of having their parent live with them. This may, of course, be a mark of human charity in adverse circumstances; but, if such a decision were made too quickly and without predicting the likely outcomes, then any ensuing relational tension might be especially difficult to manage for those with an insecure attachment organization. Thus, when working with adult children facing stressful personal decisions about how best to support their parent/s during later life, the findings may help professionals lessen the likelihood of plans being made without considering some of the personal consequences for each relational partner.

5. The opposite of fluent speech, marked by hesitations, stuttering and a general loss of articulation and semantic flow.

References


Crittenden, P.M. 1996: The modified adult attachment interview. Unpublished manuscript.

Notes

1. QMethod is available as a freeware package from http://www.rz.unibw-muenchen.de/~p41bsmk/qmethod/

2. Italics are used when the opposite meaning is intended, indicated by the positioning of a particular Q statement on the grid.

3. All names have been anonymized.

4. In these excerpts, three dots indicate a silence of 5 seconds or more.


Gillespie, J.D. 1993: *Politics at the periphery: third party politics in two-party America*. University of South Carolina Press.


Van Ijzendoorn, M.H. and Bakermans-Kranenburg, M.J. 1997: Intergenerational transmis-


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