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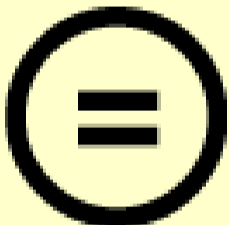
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# **The feeling of emotion across the life span**

**by**

**Jeanette Glargaard Janes**

A Doctoral Thesis

Submitted in partial fulfilment of the requirements

for the award of

Doctor of Philosophy

of Loughborough University

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# Abstract

This thesis examines emotion and the feeling of emotion across the life-span. The ageing population is growing, and as emotions may influence aspects of healthy ageing, it is of importance to know the differences and similarities in the experience and perception of emotion between the younger and older population, as this may tell us more about emotions themselves. Due to recent years' development of technology our knowledge of the neurological aspects of emotions have increased, and with this emotions have re-gained the interest of researchers from various fields such as neuroscience and philosophy as well as many areas of psychology. Still, emotion definitions are many and varied, and influenced by the area investigated. The aim of this thesis was to provide a working definition of emotion which could encompass the different aspects of what emotions are believed to be, and to investigate emotion in different age groups.

The research presented here was based upon a study of three age groups. The study induced emotion through a visual standardised stimulus (The Affective Picture System), and through an autobiographical account of an emotional event. Throughout both parts physiological data (Skin Conductance Level) and subjective ratings were taken. There were three main objectives to the analysis of the data: to compare the physiological data across the age groups, to compare the physiological data to the subjective ratings of the emotion, and to conduct narrative analysis, informed by discursive analysis, of the interview data to investigate how emotion are constructed across the age groups.

Griffiths (1997) suggested a re-categorisation of the emotion term, however, the findings in this study suggest that by having a working definition of emotion that encompasses the social, biological and psychological aspects of emotion, and a multiple methodology, we may look at the embodied emotional experience and constructions, and thus gain better understanding of potential changes in emotion and feeling of emotion across age groups. The results showed that emotion does change across the life span and thus lend support to non-universality of emotions. These results bear importance for future research in emotions, and have implications for research in affective disorders.

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# Chapter 1: Introduction

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## 1.1. Chapter summary

This chapter introduces the topic of emotion and the notion of the psychological subject, and provides reasons for looking at emotions across the life span. The thesis' epistemological stance of critical realist constructionism is introduced, a brief discussion of its strength and limitations with respect to alternative positions is presented, and some initial methodological considerations to take into account when researching emotions are addressed. Finally the research aims and an outline of the thesis are presented.

## 1.2. General introduction

Emotions and feelings are an important part of our everyday lives. Without them we would not be able to appreciate the things that make us feel human. We would feel no love, and no hate, have no likes or dislikes, no jealousy or embarrassment. Emotions, feelings, moods, are inescapable parts of everything we do, good and bad, alone or in company, yet scientifically we know relatively little about what constitutes an emotion. We know that our facial expressions can be recognized between people and cultures (e.g. Ekman, 1993), and that they are also something within us, in the brain-body system (Damasio, 1999). We know something of their importance for learning and development (de Sousa, 2001), and we also know that they are social constructs that can be linguistically evoked to serve relational functions (Edwards, 1997). Emotions have been studied since the early philosophers: in his writings on rhetoric, Aristotle offered a view as to how persuasion is linked to emotions. He argued that one must know the listener's frame of mind, and how to stir their emotions, in order to argue and persuade. Giving an example of presenting in the court or as a politician, Aristotle said:

“When people are feeling friendly and placable, they think one sort of thing; when they are feeling angry or hostile, they think either something totally different or the same thing with a different intensity: when they feel friendly to the man who comes before them for judgement, they regard him as having done little wrong, if any; when they feel hostile, they take the opposite view.” (Aristotle, 350BCE, bookII:1).

Thus, many years, and many theories have given us an understanding of emotions, what they are and what they do, but the disagreements are almost as many as the agreements. In the most basic explanation, emotions are, according to Collins Dictionary & Thesaurus, “any strong feeling, as of joy, sorrow, or fear” (2000:382), and the thesaurus for emotion tells us that “emotion=feeling” (2000:382). Oxford Advanced Learner’s Dictionary adds to the “strong feeling of any kind” (1989:394) by giving an example of usage as well: “*The speaker appealed to our emotions rather than to our minds*” (1989:394, italics in original). Aristotle saw emotions as something to take into account when dealing with rhetoric and persuasion, but this viewpoint has been replaced with the one that is exemplified in the quotation above. By not appealing to our minds but to our emotions, emotions are qualified as something other than rational. This dichotomy is at the heart of one of the discussions about emotion, whether emotion and rationality are opposites, and hence how we should understand the relationship between emotion and cognition. Descartes, for instance, separated mind and soul, and believed that it was in the soul that emotions happened. But, where Aristotle saw emotions as something related to action, Descartes’ view was that they happen to us (Oatley & Jenkins, 1996). Following Descartes’ ideas, it was largely believed that emotions were *not* in the mind (as cognition and rationality were believed to be), and although emotion may be influenced by thought, it did not in turn influence thought. This belief may be part of the reason why it was not until recently that emotions found a prominent place within psychology. In old (and some recent) textbooks emotions are mentioned in passing whilst discussing other issues, such as identity or relationships, but rarely are whole chapters dedicated to emotions as they are to cognition or memory. As Oatley & Jenkins (1996) observe:

“Emotions have traditionally been regarded as extras in psychology, not serious mental functions like perceptions, language, thinking, learning” (1996:122).

Just as research into emotions has recently become more prevalent, so the role of emotion in our everyday life seems to have changed and become more prominent. Not only in our personal relationships, where it seems that we are more freely able, even encouraged, to talk about our feelings and emotions, but also on a cultural scale does emotions seem to play a greater part in our lives: we can now legitimately take emotional leave from work, and schools are now to “encourage all pupils... to ‘explore



their emotions” (Henry, 2005:13), in order to encourage the pupils’ ‘emotional intelligence’ and “emotional and social development” (Henry, 2005:13). Being able to talk about emotional events not only enables us to learn from past events, both personally and vicariously, but research has consistently shown that it also bears importance for our health. People who can create a coherent narrative in which they can reason about and understand past events are less likely to suffer depressive or anxious symptoms, and more likely to gain better physical health (e.g. Pennebaker, 1993). Emotion and cognition and their relationship is one of the main discussions within emotion research (see Chapter 2 for a further discussion), but although the debate is ongoing as to whether emotion influences cognition, or cognition influences emotion, it is clear that there is a strong relationship between the two – as some would argue cognition and emotion are both “interactive and inseparable” (Barnett & Ratner, 1997:303), and there are reasons to believe that emotional health such as described above also influences and is helpful in preventing cognitive decline (Wight, Aneshensel, Seeman & Seeman, 2003). Although mood and emotion are not the same, they are related, and knowing more about emotions, how they are perceived and expressed may also shed light on the study of mood and mood-disorders. The Penguin Dictionary of Psychology defines ‘mood’ as “A relatively pervasive and sustained emotional state” (Reber, 1995:468), and although the American Psychiatric Association’s Diagnostic and Statistical Manual (DSM IV) (APA, 1995) does not itself define emotion it uses this definition of mood in connection with mood- and anxiety-disorders. Even though emotions have been shown to be necessary for many processes and actions, they can also be interfering and disruptive. This is what happens in phobias, where instead of a (perceived) normal reaction to a normal everyday occurrence, we act in what is believed, by both the sufferer and onlookers, to be an irrational manner as “their fear is excessive or unreasonable” (APA, 1995:443). The relationship between mood and emotion is thus important as mood- and anxiety-disorders, especially anxiety and depression (Moser & Majeed, 1999), appear to have become more common. In a recent survey of people aged 16-74 it was found that one in six suffers from anxiety, depression or phobia (Office for National Statistics, 2000). However, the reasons for this increase will not be considered here as this issue is outside the scope of this study.

The more we know about emotions, and the more skilled we become in our experimental design when investigating emotions, the better we can understand not only the impact emotions have in our everyday life, but also the impact they have on a person when they take over in ways which seem dysfunctional as is the case in emotional disorders. It is not the purpose of this thesis to enter into the debates surrounding mental or emotional illnesses and the social/medical/cultural constructs of these (e.g. Lindqvist, 2005; Parker, 1999; Radley, 1994), it is enough to state that these disorders have a mainly negative impact on the sufferers, and the more we know about what emotions are, the better we may be able to help and understand those affected. Thus, the study of emotion is important both from a general health perspective, and a social and political perspective. When social and educational policies begin to prioritise emotions and emotional well-being, it is important that we understand not only the present role of emotions in our culture, but also the underlying biological and neurological systems that enable them. If emotions really are important for the well-being of the population at large, and if emotional good health is related to less cognitive impairment as we age, services and assessments of both young and old should reflect this. It is therefore useful to know whether emotion stays stable or changes throughout the life span.

The focus of this thesis was thus twofold. Firstly, to consider theories of emotion *regardless* of their ontological assumptions, in order to gain a clearer understanding of what emotions are. Thus, although grounded within critical realist social constructionism, the present research has been influenced by other areas of psychology as well as by neuroscience and philosophy. The emotional experience cannot be limited to discourse alone, but our understanding and sharing of it takes place within the discourse. Using a multi-method approach to study emotion - combining narrative and discursive psychological methods with more traditional psychological methods such as questionnaires and physiological response measurements - allow us to study both physiological and discursive aspects of the experience.

Secondly, this thesis aimed to look at emotion in different age groups, focussing on whether the emotion changes across the life span. Based on anthropological evidence we know that emotions vary across cultures (e.g. Harré & Parrott, 1996). With this in mind it became of interest to explore whether the understanding, and/or the experience

of emotion also varies across different age groups within a specific culture. Based on Vygotsky's idea of a 'zone of proximal development' where the growing child's actions "are constructed as if they were attempts at skilled performances, be they motor or intellectual or whatever supplemented by someone who is skilled in these matters" (Harré, 2000:735) it is not unthinkable that emotions themselves are learned within a culture and developed throughout the life span, even if there are also underlying biological/neural systems. Harré (2000), for instance, suggests that "the acquisition of personhood as a complex pattern of capabilities, points of view, and so on, is accomplished in psychological symbiosis with others of one's tribe" (2000:735). As a component of 'personhood' then, emotions may be flexible and changeable, not just across cultures, but also within specific cultures. Theories of ageing and emotion have suggested that older people have attenuated emotion and better emotional control (e.g. Carstensen & Turk-Charles, 1994; Gross, Carstensen, Pasupathi, Tsai, Skorpen & Hsu, 1997), but we still know very little about why, how, and what this means for the ageing person. This study was designed to compare the different age groups' subjective and physiological experience and construction of emotion, and through this gain further understanding of the nature of emotions.

### 1.2.1. A question of relativity

Before attempting to define and research emotions there are some methodological issues that needs to be considered. As will be further discussed in Chapter 2 there are problems surrounding the definition of emotion, and these problems reflect to an extent some of the fundamental differences of opinion within psychology. Psychology is divided into different 'isms' such as cognitivism, behaviourism, social constructionism etc., and the position of the researcher with respect to these traditions informs methodological choices in psychology research. As already stated, this thesis is positioned within the realm of social constructionism, which itself is informed by different belief systems. These differences become starkly apparent in what became known as the 'realism/relativism' debate. At the heart of this debate is what we can possibly *know*. Arguing for relativism, Edwards, Ashmore and Potter (1995) write:

"Reality can only ever be reality-as-known, and therefore, however counter-intuitive it may seem, produced by, not prior to, inquiry. For what *counts as* reality is, for any particular item, at least potentially a matter of consensus and disputation. It is *not* obvious exactly where the

line should be drawn, between the objectively and the constructedly real” (1995:39, italics in original).

Realists on the other hand believe in a world that exists independently from our perception and hold that even abstract concepts can be empirically studied (e.g. Parker, 1999). While relativism is good for critical thinking and questioning, we need realism in order to make sense and order of the world (Parker, 1999). Where the relativists’ argument is a discursive or rhetorical one, they tend to not consider that this discourse is already “situated in a material world: it is always the product of embodied beings” (Cromby & Nightingale, 1999:9). Social constructionism is predominantly focussed on “practices of categorisation, or more broadly, on our ‘discursive practices’ – our ways of representing  $x$  in talk and thought” (Bakhurst, 2004:4, italics in original). Even though “higher mental functions appear first in interaction in public space before they become privatized and so individualized” (Harré, 2000:743), this does not mean that there is no reality outside of social and linguistic constructions. Thus, with regards to emotions, just because they are situated in social and cultural contexts, and even though our verbal definitions of what emotions and feelings are can be deconstructed and rewritten, this does not mean that the emotions themselves are simply matters of discourse. As Harré (2002) argues:

“Social constructionism, while denying the efficacy of social structures, affirms the reality of the discursive domain without falling into the fallacy of supposing that because many aspects of our lives are our own constructions, all must be” (2002:611).

Having said this, the discursive turn in social constructionism in which “the relativist’s claim that language is the only source whereby reality gets constructed” (Nightingale & Cromby, 2002:214) seems to have led to a neglect of those matters outside of the linguistic sphere, and returned in some form to Cartesian dualism, in which the body is discarded as unimportant.

This debate is important when it comes to choosing methodology. The various approaches one can take to investigate a research question are traditionally determined by, or dependent upon, one’s ontological beliefs, or worldview (Tashakkori & Teddlie, 1998). Morgan (2007) suggests that by allowing some shared understandings, as well as acknowledging that those ideas are not shared by all, we allow an approach in which

“there is no problem with asserting both that there is a single ‘real world’ and that all individuals have their own unique interpretation of that world” (2007:72). The ‘realism/relativism’ debate as discussed above was part of what Tashakkori & Teddlie (1998) called the ‘paradigm wars’, and according to them the result of these ‘wars’ was the emergence of a more pragmatic approach to research design and with this, new forms of mixing methods across the qualitative and quantitative approaches. Rather than choosing the method based upon ontology or epistemology, the “pragmatists consider the research to be more important than either the method they use or the worldview that is supposed to underlie the method” (Tashakkori & Teddlie, 1998:21). This is supported by Morgan (2007), who suggests a pragmatic approach to research in which methodology is at the centre between epistemology and methods. Here “it is not the abstract pursuit of knowledge through ‘inquiry’ that is central... but rather the attempt to gain knowledge in the pursuit of desired ends” (2007:69). The issues surrounding mixed methods will be discussed further in Chapter 4.

### 1.2.2. Embodied emotions

The relativist view that reality is constructed through language alone “means that our lived experiences as embodied beings and our sensuous physical nature are forever denied” (Nightingale & Cromby, 2002:214), and as such our own experiences of *feeling* emotion, either mentally, bodily or in conjunction, becomes dependent not just on our verbal excellence, but also on whether a particular experience warrants a linguistic construction. Although discursive psychology acknowledges the presence of the body in emotion (“...anger or exasperation, whether performed bodily or evoked linguistically...” Edwards, 1997:170), emotion is seen as a *performance*, rather than as an experience, and thus the emphasis in discursive psychology’s emotion research is on how “emotional states may figure as things to be *accounted for*” (Edwards, 1997:170, italics in original). The biological processes, which form part of the embodied experience of emotion, and as such are “not wholly irrelevant to their character” (Cromby, 2004:134), are only relevant to discursive psychology in so far as they are made discursively available. This one-sidedness parallels similar exclusions in mainstream psychological research. Some mainstream emotion research for instance, looks *only* at a person’s ability to recognise and name a facial expression (e.g. Ekman, 1993), or uses *only* questionnaires to assess personal experiences (e.g. Gross,

Carstensen, Pasupathi, Tsai, Skorpen & Hsu, 1997). In these instances the personal account of the emotion experience is left out, and the variation of linguistic explanations in answers is disallowed by use of pre-determined categories or answers. Emotion is seen as a quantifiable stable, where emotions are universal and biological, whose “primary function ... is to mobilize the organism to deal quickly with important interpersonal encounters, prepared to do so by what types of activity have been adaptive in the past” (Ekman, 1999:46).

Through emphasising the embodiment of emotion, Burkitt’s (1999) theory may provide a link between realism and relativism. Burkitt tries to avoid separating mind and body, instead suggesting an embodied subjectivity that experience and express emotions within social relations. Burkitt (1999) sees emotions as “complexes; that is, as experiences involving physical, symbolic and relational elements” (1999:110). To him the relational elements are especially important, since human feelings arise between self and other, and within social relations and cultural practices. He also, however, acknowledges that emotions exist in their own right outside of “cultural norms [and] cognitive categories” (1999:112), thereby explaining why not all emotion and feelings can be “adequately express[ed], or [why we may] experience contradictions between thought and feeling” (1999:112). Thus, emotions can be ‘real’ and ‘tangible’ in the sense that they are biologically derived. ‘Anger’, for instance, can be expressed facially, physiologically and behaviourally in specific ways across a range of cultures. Yet, verbally, we are able to use our shared understanding of anger to construct a reality relative to the here and now, where we can actively re-construct our actions to the present audience, or to ourselves. Emotions then, can be constructed through narratives, but within biological and cultural restraints.

### **1.2.3. Making sense of the emotional embodied psychological subject**

Although this thesis is about emotion across the life span, it is important to note the relationship between the psychological subject and emotion (see also further discussion in Chapter 2). This can be seen

“in how people reflect upon their actions in their personal narratives...[and how] in the story told in the interview situation, people actively construct themselves based upon reflections on how they should have or should not have reacted. Thereby they not only show an

orientation towards what they believe is morally right, but also explaining and reviewing themselves in the process” (Rasmussen & Cromby, 2003).

This relationship between psychological subject and emotion can be found within narratives of personal events. There are different types of narratives, or stories – broadly speaking, fictional and non-fictional. But the common factor among all narratives is their inherent logic, or structure, which we all seem to understand and produce from an early age (Mar, 2004). Neuroscience have found that there seems to be brain areas

“consistently activated during particular story processes...[and that] these brain areas appear to be unique to narrative-processing, separate from those identified for word and even sentence-level operations” (Mar, 2004:1429).

It should not, however, be assumed that the ability to understand and produce narratives is something that is innate in human beings. Narratives are social and cultural constructions, widely reflecting learned structures and meanings. It is predominantly through our language, which is embedded in “historical and social structures” (Crossley, 2000:21), that we make meaning of events. The narrative itself is a form of self-construction or self-evaluation (DeConcini, 1990), and thus by relying on this form of remembering we are inflicting not only the structure of the story upon the event, but are using the narrative as sense-making of the event. There are different approaches we can use to represent reality (Potter, 1996), and within these we rhetorically reconstruct the events as doing something, having a purpose. Thus, we present ourselves through our narratives, to ourselves and to each other, and allow listeners to emphasise with us and vicariously learn from our story; and in telling our story we construct it and ourselves for the moment in which this telling takes place (Bauer, Stennes & Haight, 2003; Cortazzi, 1993; Phillipot, 2003). Murray (2003), for instance, defines narratives as

“an organized interpretation of a sequence of events [which is concerned] with the human means of making sense of an ever-changing world. It is through narrative that we can bring a sense of order to the seeming disorder in our world, and it is through narrative that we can begin to

define ourselves as having some sense of temporal continuity and as being distinct from others” (Murray, 2003:111).

Thus drawing on past experiences such as emotional significant events can tell us something about our past and present perception of ourselves. This is exemplified by Mills’ (1997) case studies of older people with dementia, which showed that talking about their past not only in some cases seemed to prolong or better participants’ well-being, it also facilitated a stronger sense of psychological subject.

Hence, it is through our narratives that we make sense of who we are, compared to who we were, who we would like to be, and how we would like to be in the eyes of ourselves and others. This accords with the social constructionist view that persons do not just have one personality, as in trait, role and humanistic theories, but draw upon multiple perspectives “to describe themselves” (Potter & Wetherall, 1987:102). As Burkitt puts it:

“The state of self conscious ‘individuality’, where each individual takes on their own identity, is not innate or prior to society but only comes into existence *through* social relations” (Burkitt, 1991:190)

Thus, there seems to be consensus that through reflection upon our past experiences we build a picture of ourselves; who we are today is based upon how we have previously reacted to the events of our lives, the sensory experiences as well as verbal and behavioural feedback from significant others (Decety & Chaminade, 2003).

This brings us back to the problem of realism versus relativism. If realism is defined as Burkitt (1999), for instance, defines rationalist realism, that “there is a real world just beyond human reach, one that subjects can only come to know through a more accurate subjective picture of what objectively exists” (1999:67) then we allow the Cartesian view of the rational mind, separate from body and sensuous experience to prevail. This leaves the individual experiencing emotion to be unquestioning of his or her emotionality and preceding and subsequent actions. Emotion in a realist world is rather unchangeable, and thus cannot be helped. The social consequences of pursuing this view may be to legitimate irresponsible behaviour to be explained, excused and accepted through the ‘reality’ of emotions such as anger. If on the other hand we allow



emotion to contain at least an element of relativism, we can begin to understand how the changing importance of emotion is bound up with social and cultural changes which emphasises how the individual need to re-visit their emotionality. Daniel Coleman, for example, who has become a household name to be found in any bookshop, coined the term 'Emotional Intelligence'. The back-cover of his book reads:

“Emotional intelligence includes self-awareness and impulse control, persistence, zeal and motivation, empathy and social deftness. These are the qualities that mark people who excel: whose relationships flourish, who are stars in the workplace” (Coleman, 1996: back-cover).

Thus, after being banished in the Cartesian society as opposing the rational mind, emotions are today imperative to success. There is a short distance between emotional intelligence – the ability to be aware of and control emotions – and Edwards' (1999) suggestion that emotion talk is used as a rhetorical tool to intentionally *do* something for us. Hence, these two viewpoints can be seen as two sides of the same coin: one is control of actions; one is control of language. Our perceptions of how emotions are used and what they are used for have perhaps changed, but the various dualisms constructing them remain firmly in place. It is not just the mind-body dualism that realism and relativism retain, each in their own way, but also the dualisms between nature-nurture, individual-society, and intellect-emotion.

In order to research emotions across the life span then, it is important to take a viewpoint somewhere in between the rational realist and the relativist. If we were only concerned with the realists' point of view, we would look at emotions only by physiological and quantifiable means, disregarding the personal, social and cultural heritage and experience. From a relativists point of view we would be concerned only with how the concept of emotion is used rhetorically in the here and now, the body would be irrelevant, and the physical sensations that might or might not be experienced would be of interest only in so far as they were verbalised. The critical realist constructionist stance taken here is then somewhere in between - appreciating that emotions are embodied but are not merely something 'within' us. “It is a reality that is constructed between the person and his or her world” (Butt, 1999), and thus becomes tangible through physical sensations and verbalised reflections and realisations. Following Cromby's (2004) notion of embodied subjectivity, in which

“theorization... requires both halves of each of these pairs [of dualisms] to be conjoined in a both/and fashion, treated as interdependent and mutually constitutive rather than exclusive and oppositional” (2004:134),

this study locates emotion in this space ‘in between’, neither reducible to biological or neurological observable processes, nor to mere discursive social constructions, but nevertheless as something that can be studied within both cultural and biological paradigms. For this study, then, the multi-method approach seems appropriate as it allows the researcher to equally emphasise both biology, in the form of physiological measurable reactions to emotional stimuli, and discourse, in the form of how emotional experiences are verbally constructed and re-constructed. When studying emotion we need to look at both the physiological and discursive aspects of the experience as part of the emotional experience is outside of the discursive sphere, although our shared understanding of it takes place within and often through discourse.

### **1.3. Overview of the study**

The main aims of this thesis were to outline the theories of emotions and to develop a working definition of what emotions are in order to design a study which could investigate emotions across the age groups. The study looked at the physiological and subjective responses to emotional stimuli, and investigated how people talk about an emotionally significant autobiographical memory.

In order to investigate emotions across the life span it was decided to look at three age groups: 18-21 year old, 35-50 year old, and 65 and older. For several reasons it was decided not to look at people younger than 18 years old, among these practical issues such as ethics and access, but also for developmental reasons. As emotions take place in the brain-body system, there may be organic differences in younger people’s emotions as compared with fully developed adults. For the purpose of this thesis it was not possible to design a study which also looked at organic issues such as brain structures, even though potential differences found in the older age group might be associated with structural changes in the brain.

There were two parts to the study. In the first part the participants were asked to talk about a significant emotional event. In the second part of the study the participants were asked to view and rate a series of pictures taken from the International Affective Picture System (IAPS), a tool developed specifically for emotion research. Skin conductance level was measured throughout, and questionnaires and further questions about their emotions were issued. The study was designed to enable analysis of physiological measures and standardised emotion inducers as well as the social construction and experience of emotion.

## **1.4. Outline of the thesis**

Chapter 2 discusses the concept of emotion. It reviews some of the most significant debates that have taken place in emotion theory, and assesses relevant evidence. It further introduces recent research in neuroscience and philosophy that has made an impact in emotion studies. The relationship between embodied subjectivity and emotion is then discussed. The usage of terms such as self, subjectivity, identity and self-hood are historically and socially variable, and as such cannot be used as having singular meanings. Changing meanings of what it means to be a person are discussed with reference to emotion and the feeling of emotion, and the chapter concludes with a working definition of emotion.

Chapter 3 discusses ageing. It outlines some of the physical and psychological age related changes that take place in the human beings, with respect to issues such as cognition and memory as well as emotion, and discusses the relevance of emotions for healthy ageing.

Chapter 4 provides an overview of some of the methodological considerations that were made in order to undertake research combining different methods. The method is described in detail, introducing the materials used for emotion induction and for taking the physiological measures, as well as describing the procedures followed during the study. The quantitative and qualitative analyses are discussed, and the pilot studies that were undertaken are summarised.

Chapter 5 reports on the quantitative results. The first part presents the results of the ratings of the pictures, followed by the physiological results both for pictures and interview. A comparison between the various data (subjective ratings of pictures and interview, physiological measures and questionnaire data) is offered. The chapter concludes with a comparison between two groups of people with the highest and lowest increase in skin conductance level from baseline to interview.

Chapter 6 discusses the quantitative results. It compares the findings to previous literature, highlighting the differences found between the age groups in the subjective ratings of the pictures and in the interviews as well as with regards to their physiological responses.

Chapter 7 presents part 1 of the narrative analysis. The interviews were grouped in themes according to what the participants talked about. The first part of the chapter gives an overview of the narrative themes, and introduces the trauma narratives, and their sub-plots, which were selected for an in-depth analysis. The second part of the chapter analyses and discusses the narrative structure including how the narratives are classified as being regressive, progressive or stable, identification of narrative tone, uses of metaphors and similes, identification of the rhythm in the narratives, and interactions in the interviews.

Chapter 8 presents part 2 of the narrative analysis. This part of the analysis draws more heavily on discursive psychology, and provides a detailed analysis of how emotions are constructed in the narratives. The first part of the chapter deals with how internal states are constructed in the narratives through the use of cognitive, perceptual and emotional references, and how emotion discourse is constructed through the use of rhetorical contrasts. The chapter then discusses emotion and control, and concludes with a discussion of how emotions are inter-related with the psychological subject, cognition and culture.

Chapter 9 introduces two case studies from the trauma narratives. This chapter links the physiological with the narrative, as the case studies are of the two participants who had the lowest and highest physiological response to talking about their emotional experience.

Chapter 10 brings the methodologies together, discusses how the findings complement each other, and highlights the differences and similarities found between the age groups in this study.

Chapter 11 provides a summary of the thesis, and discusses the contributions to knowledge, the limitations of the study, possible future research, and reflects on the researcher's position in the study.

## **1.5. Chapter conclusions**

The study of emotion is an area, which has recently regained interest from various fields, including psychology, philosophy and neuroscience. The issue of how and if emotions change across the life span has social, educational and political concerns as well as scientific implications. Literature reveals that we still know very little about emotions and their full impact on our daily life, and their potential importance for healthy ageing. Emotion research covers a wide range of issues from the recognition of facial expressions across different cultures to how emotion talk is used to 'do' something in our personal relationship. The definition of emotion is thus not something singular, which makes the comparability of the studies difficult.

Researching emotions from a critical realist social constructionist point of view legitimates a study which can draw on both the biological and cultural, and a methodology that can use discursive psychological means as well as physiological measures and questionnaires to investigate how emotion is constructed within the realms of biology and culture, as both real in the sense of being embodied, and relative in the sense of being narratively and discursively constructed in the research situation.

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# Chapter 2: Feelings and emotions

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## 2.1. Chapter summary

This chapter will describe some of the most influential theories of emotion, and will construct a working definition of what emotions are. It will discuss how the mind and body are both of importance in the experience of emotion and how there is a difference between emotion and the feeling of emotion. The first part of the chapter discusses the problems of defining emotion, and reviews some of the evidence associated with different theories of emotion. The second part of the chapter reviews recent philosophical and neuroscientific work on emotion, and discusses the significance of this work for how emotion can be defined. The chapter concludes with a working definition of emotion and feeling of emotion based upon the research and theories reviewed.

## 2.2. Introduction

With the recent development in our ability to see what happens in the brain through brain scans and imaging, the study of emotions has increasingly moved towards the study of various brain functions, and how they interact with the internal (bodily) and external (cultural) environment. As mentioned in Chapter 1, however, emotions and what they are, their origins, causes and functions have been discussed for centuries. With Descartes' dualism, emotions (being bodily grounded) were taken to be polarised with logic and rationality (being in the mind), and it followed that emotional reactions were irrational and disruptive. In recent years, this assumption has been challenged and emotions have been found not only to have an impact<sup>1</sup> on decision-making (Barnes & Thagard, 2002; Bechara, Damasio, Damasio & Lee, 1999; Damasio, 1994; Gazzaniga & LeDoux, 1978), but also on action (Zhu & Thagard, 2002), reasoning (Hanoch, 2002), learning and development (de Sousa, 2001).

Emotions are thus an important part of our everyday life. While all organisms experience emotions (Damasio, 1999; LeDoux, 1998), humans talk about them, re-

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<sup>1</sup> Emotions' influence on decision-making can be both positive and negative, this will be discussed further in part 2.6.1.

experience them, and tell stories about them. According to Heelas (1996), emotions are often thought of and talked about as inner states “generated by external events” (1996: 184) linked to social and cultural life. In different cultures the causes of emotions are variously understood as ranging from the supernatural and God’s work through to social learning and social control theories, and the categorisation of emotions into ‘good’ and ‘bad’ is influenced by cultural and moral values (Heelas, 1996).

Although ways of understanding and categorising emotion have been found to differ across cultures, facial emotion expressions such as anger or sadness are generally believed to be widely recognised (e.g. Ekman & Friesen, 1971; Griffiths, 1997). Due to the importance of emotions in human social interaction, it has been questioned whether emotional expressions are universal. If emotional expression (as studied by facial expressions) is displayed, recognised and responded to similarly by all healthy people in all cultures, then there are grounds to assume an underlying uniformity, which can then lead to universal moral and aesthetic judgements (Griffiths, 2001). If, however, emotions can only be understood within a person’s own cultural group “this would seem to support cultural relativism about emotion and thus about ethics and aesthetics” (Griffiths, 2001:1).

This debate is important in the sense that if emotions are universal, there would be strong evidence for a biologically evolved pattern, which is relatively independent from environmental factors and thus rather unchangeable. This has implications not just for social organisation where emotions play an important part in social interactions, morals and social judgements, but also for research into human behaviour and development. In a textbook chapter on non-verbal communication, for instance, we find that the chapter predominantly discusses emotional display in infants and children (Durkin, 1995, pages 255-262). A smile in our culture is largely perceived as conveying positive emotion, and developmental research suggests that the smile in infants is an innate response to external stimuli such as seeing the mother or hearing the mother’s voice. That it is not a learned or imitated behaviour is suggested by studies of babies born blind, who also smile when hearing their mother’s voice (Izard, Huebner, Risser, McGinnes & Dougherty, 1980). These findings have implications for discussions of the development of self, theory of mind, attachment etc, and thus the implications of how we define emotions are far-reaching in psychology. It also bears importance for how psychology

studies emotion itself. As discussed in Chapter 1, psychology is already divided in schools of belief systems, which study emotion based on their own fundamental interests and research methods. If emotions were universal and largely unchangeable it would lend support to evolutionary psychology, whilst areas such as discursive psychology would struggle to argue emotions' relative importance in everyday talk, and clinical psychology may have to re-think some disorders. For instance in DSM-IV 'Panic Disorder' shares both biological and cultural traits such as "First-degree biological relatives of individuals with Panic Disorder are up to 8 times more likely to develop Panic Disorder" (APA, 1995:437), and "In some cultures, Panic Attacks may involve intense fear of witchcraft or magic" (APA, 1995:436). The importance of social awareness is highlighted in the description of how some "Individuals with Panic Disorder fear that the Panic Attacks are an indication that they are 'going crazy' or losing control or are emotionally weak" (APA, 1995:434).

Knowing about emotions, how they are experienced and perceived is also important from a quality of life aspect (Strongman & Overton, 1999). Gross, Carstensen, Pasupathi, Tsai, Skorpen & Hsu (1997) have suggested that emotional reactivity changes with age and that there is a "decreased emotional experience of anger, sadness, and fear (but not disgust), and... increased experience of happiness" (1997: 595), as well as a better ability to control emotions. Unfortunately, the majority of studies of emotion and ageing do not report how they defined emotion, and so we may be looking at and comparing different things across different studies. This is typical of emotion studies in general, as very few studies clearly state how they define emotion. Malatesta & Kalnok (1984) is an atypical example, clearly stating their allegiance to Izard's theory of differential emotions. Others, such as Carstensen & Turk-Charles (1994) indirectly define emotion by starting their article as follows: "From the first days of life, emotion is integral to human survival. The experience of emotion motivates people to act" (1994:259). However, a majority of studies covertly define emotion through their method. For example, Fiorito & Simons (1994) treat emotion as something which can be both physiologically measured and assessed by self-reports quantified through pre-determined statements: "To assess the organization of emotional responding, activity from both the zygomatic and corrugator muscles was recorded along with heart rate, skin conductance, and self-report" (Fiorito & Simons, 1994:514). When emotion is not defined, and it has not been made clear what aspect of emotion is under study, it



is of even more importance to know whether the study was questionnaire or laboratory based, which emotion inducers (such as visual or autobiographical stimuli) were used, and if the participant were asked to recall or label the stimuli. Especially so, if the intent is to generalise the findings across age, as cognitive processes and brain structures have been found to change with age. The research that has been done with regards to ageing and emotions has predominantly been concerned with these changing brain structures (e.g. Gunning-Dixon, Gur, Perkins, Schroeder, Turner, Turetsky, Chan, Loughhead, Alsop, Maldjian, & Gur, 2003; Rutten, Korr, Steinbusch, & Schmitz, 2003); the ability to recognise emotions based on facial expressions (e.g. Calder, Keane, Manly, Sprengelmeyer, Scott, Nimmo-Smith, & Young, 2003); emotional memories (e.g. Carstensen, & Turk-Charles, 1994) and questionnaire studies of emotional control and expression (Gross et al., 1997).

## 2.3. Defining emotion

Even though emotions have been a part of our life always, and even though psychology for a period of time has largely ignored the subject, many theories, thoughts and beliefs have been put forth on what emotions are. When looking at the different studies of emotion the common factor seems to be the lack of a single definition of what emotions *are* – not just what they *do*. As mentioned in Chapter 1, the definition given in the dictionary explains what emotions are through a linguistic likening to feelings, so that by understanding what a feeling is, we understand what emotions are. Emotions and feelings, however, are not necessarily the same. The usage of the words are not for instance, directly interchangeable, as we can say ‘I feel afraid’ but not ‘I emotion afraid’ (Wierzbicka, 1999). Anna Wierzbicka (1999) discussed the importance of language use and argued that some researchers see the term emotion as more objective and therefore scientifically more correct, “whereas feelings cannot be studied at all” (1999:7). The dictionary’s definition of emotion as ‘a strong feeling’ not only incorporates in the definition a sense of inherent understanding of what a feeling such as anger or jealousy may be, but it also signifies an English understanding. In Danish for instance, the definition “emotion is a strong feeling of any kind” would translate to ‘feelings are a strong feeling of any kind’, which makes little sense, whereas the example of usage -“*The speaker appealed to our emotions rather than to our minds*” (Advanced Learner’s Dictionary, 1989:394, italics in original) and this distinction

between feeling and mind does make sense, presumably because of a shared Cartesian cultural understanding. Thus the words themselves do not explain the complete nature of emotion and feelings, but the explanations of how we would use the words give us an insight into the cultural meaning of emotions.

Griffiths (1997) argued that emotions cannot be categorised and researched as one entity, and “that we will need conceptual revision in order to construct a scientific psychology of emotion” (Griffiths, 1997:138). By categorising various acts, beliefs, feelings, physiological responses etc. as emotion, we imply that there is a unitary factor underlying these phenomena. Although ontology and method exist “in a relationship of mutual regulation” (Archer, 1995), and one’s questions and methods thus guide one’s answers, according to Griffiths it is nevertheless not possible to find a common factor in the findings to justify an emotion category. He thus argues that “current knowledge suggests that the domain of emotion fractures into three parts” (Griffiths 1997:14) – ‘affect program responses’, higher cognitive states’ and ‘socially sustained pretenses’. He suggests that one should aim to understand emotion within these three parts, where each of the theories has something to offer for the understanding of emotions, whereas none of the theoretical explanations can adequately explain emotions whilst seen as one concept. Thus, according to Griffiths, before we can go further in the scientific study of emotion, we need to look at emotions as three separate entities. This view is not, however, shared by all. Jesse Prinz, for instance, suggests that all “emotions are unified” (Prinz, 2002:6), and even though Antonio Damasio (1999) suggests that we look at emotions as primary, secondary and background emotions, he does not suggest such a separation in the concept. Before outlining Damasio’s theory of emotion (in part 2.6.), some of the earlier psychological theories of emotion will be described as well as some of the studies which in one way or another have had an impact on the theories of emotions and our beliefs about what emotion influences, and what influences emotion. Within this, Griffiths’ three ‘parts’ of emotion will be described, which will highlight perhaps, the difficulties in defining emotion itself.

## 2.4. ‘Basic emotions’ and other emotions

Griffiths’ (1997) distinguishes between ‘affect program responses’, higher cognitive states’ and ‘socially sustained pretenses’. What Griffiths call ‘affect program responses’ reflect what is generally known as ‘basic emotions’, and can, according to him, be explained by the affect program which is “the coordinated set of changes that constitute the emotional response” (Griffiths, 1997:77). There seems to be a general consensus among researchers of emotions, that there is such a thing as ‘basic’ or ‘primary’ emotions. This attempt to distinguish basic emotions can be traced back to Darwin’s work on emotions - most notably ‘The Expression of Emotions in Man and Animals’ (1965 [1872]) which has become the base on which many theories are built (Griffiths, 1997). Darwin noted that similar expressions of emotion can be found in humans and animals - and “thought of an emotion as a sensation expressed by the physiological manifestations he studied” (Griffiths 1997:45). Darwin believed that

“The community of certain expressions in distinct though allied species as in the movements of the same facial muscles during laughter by man and by various monkeys, is rendered somewhat more intelligible, if we believe in their descent from a common progenitor” (Darwin, [1872] 1965:12 in Griffiths, 1997:44).

These early thoughts about the universality of (some) emotions led to scientific research of facial expressions. This extensive research has found that some facial expressions of emotion are found across cultures and in some primates. The question of universality of facial expressions is, however, not so simple. Paul Ekman has been studying facial expressions in humans since 1965 (Ekman, 1993) and although he and others have consistently found evidence of recognition of facial expressions across different cultural groups, he has been careful to point out certain caveats in the claim of universals. Among those are: the recognition of an emotion expression is based upon photographs, not ‘real life’-exposure or video-sequences, individual differences have been found, and interestingly:

“The studies that determined the information observers obtain from facial expression when they are seen out of context – disembodied – answers the question of what the face *can* signal, not what information it typically *does* signal” (Ekman, 1993:5, italics in original).

With this in mind, there is, however, evidence for some forms of cross-cultural understanding of facial expressions, and although the eliciting cues may be influenced by culture “the fact that an arbitrary feature is found throughout the species stands in need of evolutionary explanation” (Griffiths 1997:58). Further support for this is found in the neurologist, Antonio Damasio’s writings. Damasio (1994, 1999) supports Darwin’s view that basic emotions are found across species. He argues that although

“learning and culture alter the expression of emotions and give emotions new meanings, emotions are biologically determined processes, depending on innately set brain devices, laid down by a long evolutionary history” (Damasio, 1999:51).

He claims that these processes in the brain can in similar form be found across species, and that the differences between species are not so much in emotion as in the *feeling* of emotion. (For a further discussion of Damasio’s theory of emotions, see part 2.6).

Theorists such as Tomkins (1962) and Ekman (1984) based their understanding of basic emotions predominantly on facial expressions; Plutchik (1980) argued that other body parts were also involved; and other theorists have based their suggestions on behaviours following brain stimulations (e.g. Panksepp, 1982) or use of emotion words (e.g. Johnson-Laird & Oatley, 1992). The consensus about basic emotions, however, is that they are ‘universal’ in the sense that they are short-term automated responses; that “some if not all biologically basic emotions are shared with lower animals” (LeDoux, 1998:114); and that they consist of facial expressions (especially Darwin, 1965; Ekman & Friesen, 1971); neurological activity (especially Cannon, 1920; Damasio, 1994); and physiological responses (especially Lange & James, 1922). Before we enter the debate of what ‘basic emotions’ and ‘other emotions’ are we first need to look at some of the early significant studies and ideas of what emotions might be.

### **2.4.1. From physiological changes to cognitive appraisals**

The practice of investigating specific emotions has drawn on both the expression of the emotion along with the immediate situation, and in the quest to determine what constitutes emotions, the order of the actions causing the emotion has also been assessed and theorised. Fear seems to be the emotion that is most often used as an

example, both in explorations and explanations<sup>2</sup>. A common-sense theory of fear would be that you perceive the object, believe it to be dangerous which then leads to a response, e.g. running (Plutchik 1994). William James and Carl Georg Lange (1922) (The James-Lange Theory) independently questioned the order of what happens and suggested that instead of running because we are afraid, we are afraid because we are running. Thus, we perceive the object, then we have a sensory feedback in form of motor reaction and visceral arousal which causes us to perceive the emotional feeling we call fear (Lange & James, 1922), in William James' words:

“the bodily changes follow directly the PERCEPTION of the exciting fact, and that our feeling of the same changes as they occur IS the emotion” (1922 [1884]:13, italics and capitals in original).

The James-Lange Theory opened up a whole new debate of what emotions might be. Arguing against this theory and bringing the physiological interrelation of emotions into the picture, Walter D. Cannon (1920) questioned the claim that the perception of the bodily changes constitutes the emotion. As he in his research had found that many external stimuli produced similar bodily changes or Autonomic Nervous System (ANS) responses, how then, could it be perceived to be, or associated with, different emotions. His claim was that some emotions, “such as joy and sorrow and disgust – *when they become sufficiently intense*” (Cannon, 1920:277-278, italics in original) present the same visceral changes, and thus how we “distinguish emotions from one another must be sought for elsewhere than in the viscera” (Cannon, 1920:280). He suggested that perception led to hypothalamic arousal, which *simultaneously* causes the bodily changes and the emotional feeling. Cannon and his colleague Philip Bard had in their experimentation with animals found that it was only when the hypothalamus was severed that there was no emotional reaction. He also pointed to Sherrington's (1900) studies of dogs, which showed that even if the spinal cord and the vagus nerves (which regulate the functions of organs in the thoracic and abdominal cavities (Carlson, 1992:101)) were severed, it would not inhibit the animal's emotional response. In addition, Cannon questioned the James-Lange Theory by claiming that the ANS was too slow in reacting to an external stimulus for it to be the reason for the quick responses, especially those connected with fear and startle.

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<sup>2</sup> Much of the early and even recent research into emotion has made widely use of animal experiments, and a lot of our knowledge of physiological reactions are based on the findings in these studies.

Stanley Schachter and Jerome E. Singer (1962) went a step further than Cannon in their critique of the James-Lange Theory, suggesting that cognitive factors are the most important determinants of emotions, and that

“one labels, interprets, and identifies this stirred-up state in terms of the characteristics of the precipitating situation and one’s apperceptive mass...[and that] ... an emotional state may be considered a function of a state of physiological arousal and of a cognition appropriate to this state of arousal” (Schachter & Singer, 1962:380).

In their now well-known experiment Schachter and Singer (1962) injected participants with either epinephrine (adrenaline) which amongst other effects causes the blood pressure and respiration to increase, or with a placebo. The participants were then placed in conditions in which a stooge acted either euphorically or angry. As the participants were unaware that the injection was adrenalin, and were blind as to what the study was about, it was expected that they would react to the cues from the stooge in order to make sense of the physiological arousal. The results indicated that although the physiological arousal were important, the emotion perceived by the participants were more a result of cognitive cues in the environment, than the physiological arousal and the perception there-off. The main objection to the results in this experiment was that the physiological arousal was abnormal, and it has since been found that people who experience abnormal physiological arousal will look for clues in the environment, and invent an explanation for this arousal, a “phenomenon known as confabulation” (Gazzaniga and Smylie, 1984; Nisbett and Wilson, 1977, in Griffiths, 1997:83).

Although Schachter and Singer’s (1962) methods and conclusions may have been slightly biased towards finding evidence of people’s cognitive appraisal of their environment more so than physiological changes, the findings of this study did, however, highlight something very important. Even though the objections to the study – that it was an abnormal physical arousal – were valid, the participants did not perceive it as being abnormal, or even question it (or at least they were not reported to). Thus, the results indicate that when we perceive a physiological change, such as for instance, arousal (normal or abnormal) we will, without conscious intent, make use of our social and cognitive skills to explain these bodily changes, and in doing so makes use of concepts and emotions which are culturally accepted and seem reasonable for the given situation. Furthermore, neurological studies have found how, for instance, people

with “damage to the right parietal cortex [can experience a condition called] contralateral neglect, a condition in which the left half of the visual field disappear from consciousness” (Baars, Ramsøy & Laureys, 2003:672). These patients experience that the left part of their body, more specifically their arms and legs, does not belong to them. Research into neurological damage like this, consistently show how people trust their feeling that the limb is foreign to them, and try to make up plausible explanations to explain its presence<sup>3</sup>. The significance of using these studies as an example is not just that neurological signals may confuse our understanding of our own body, or emotions, but in how our own orientation to the body becomes something to explain in order to understand.

### 2.4.2. What are the ‘basic emotions’?

Although the term basic emotion is widely recognised and used, the emotions it covers are debated. Ekman (1984) named six basic emotions: fear, anger, disgust, sadness, happiness and surprise. Tomkins (1962) suggested that basic emotion consisted of eight emotions: fear, rage, disgust, shame, anguish, interest, joy and surprise. Plutchik (1980) also labelled eight emotions: fear, anger, disgust, acceptance, sadness, anticipation, joy and surprise. As can be seen of these lists, although some are the same (fear, disgust and surprise) and some are similar (joy/happiness, rage/anger, anguish/sadness), some of the emotions listed differ fundamentally from each other (shame, interest/acceptance, anticipation). Some of these discrepancies can be explained by Ekman’s (1993) suggestion to “*consider emotions as families*” (Ekman, 1993:3, italics in original). Ekman and Friesen (1978, cited in Ekman 1993) found that each ‘basic emotion’ consisted of “a variety of related but visually different expressions” (1993:3), which share some “core configurational properties” (1993:3) which distinguish them from other ‘basic emotions’. Thus anger and rage are part of the same family with similar properties but different intensity, and is distinguished from joy and happiness. Other discrepancies in the lists of ‘basic emotions’, such as shame, interest/ acceptance, anticipation, cannot, however, be adequately explained by ‘emotion families’. Before

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<sup>3</sup> Oliver Sack’s book ‘The Man Who Mistook His Wife for a Hat’ (1985) is about some of his patients with neurological damage. The story ‘The Man who Fell out of Bed’ (pages 53-55) is about a man who finds what he believes to be a ‘joke’ leg in his hospital bed. When he throws it out, he himself follows. He angrily tries to get rid of it, and Oliver Sack tries to explain to him that it is in fact his own leg. The patient replies “A man *should* know his own body, what’s his and what’s not – but this leg, this *thing*... doesn’t feel real – and it doesn’t look part of me” (1985:54).

we attempt to explain this discrepancy we need to look at what the ‘other’ emotions are thought to be.

### 2.4.3. ‘Basic’ emotions versus ‘other’ emotions

Some believe that ‘other emotions’ are mixes of the ‘basic emotions’, for instance, Plutchik (1980) proposed that guilt is a mix of fear and joy, fear and surprise becomes alarm, and fear and anticipation lead to anxiety. Although these (and other) emotions are based upon the basic emotions, they are not mere ‘automatic responses’ but dependent on cognitive abilities. Thus, they differ from ‘basic emotions’ in that they allegedly are uniquely human, but also in that they are more likely to differ across cultures (e.g. Griffiths, 1997; LeDoux, 1998) due to their cognitive content. It is not just emotions such as guilt or anxiety that have cognitive properties, ‘basic emotions’ – such as anger – can change status from being a basic emotion to an ‘other’ emotion when cognitive appraisal takes place. For instance, anger as a basic emotion is “*momentary*” (Ekman, 1993:7). But it can extend from a ‘momentary, automated response’ to a prolonged emotion, where the situation is appraised, thought about, managed, future responses are being planned, etc. We would still term the emotion as ‘anger’, but according to the basic emotion theories, it would be fundamentally different from ‘anger as a basic emotion’. According to Griffiths (1997) these emotions are examples of ‘higher cognitive states’, best explained by the developmental systems perspective, which treats emotions as “heterogeneous constructions” (Griffiths, 1997:132), i.e. constructed both through biology and evolution and through social and cultural learning. Here it must be pointed out how interesting it is that Ekman, although his focus has been on basic emotions, does not at all rule out the social and cultural learning, and thus Griffiths’ suggestion that ‘the affect program responses’ can only explain ‘basic emotions’ is his belief, and not necessarily shared with those researching basic emotions. Another interesting point here is the research itself. When Ekman and colleagues showed pictures of facial expressions to people, the responses were often varied and in many cases inferred by talk about how, why, or in which situations a facial expression would be found (Ekman, 1993). This in itself brings about an element of social learning and points towards even basic emotions being more and other than *just* biological, innate responses.



Ekman (1999) suggests that there are several meanings of the word ‘basic’ which can accommodate the different schools of belief:

“Even the discovery of universals in expression or in antecedent events does not require giving a major role to evolution. Instead, one can attribute universals to species-constant learning – social learning which will usually occur for all members of the species, regardless of culture... The second meaning of the adjective ‘basic’ is to indicate instead the view that emotions evolved for their adaptive value in dealing with *fundamental life tasks*” (Ekman, 1999:1, italics in original).

Thus, Ekman (1999) argues that by allowing ‘basic’ to have more than one meaning the existence of basic emotions can be widely agreed upon. However, it cannot but show that ‘basic emotions’ are but social constructs, as are Griffiths’ (1997) identification of ‘higher cognitive states’ and ‘socially sustained pretenses’. Whereas we do not disagree with the biological aspect of emotions being ‘something’ innate in humans and other primates that happens in one or other situation, alone or in company; we believe that the moment we bring forth a shared understanding and attempt to construct a category in which this ‘something’ can exist as ‘emotion’ – basic or not – it has already become a social construct. That this may be so has some support in development psychology, for instance. The developmental theories are of course more concerned with the healthy development of the child, but in their studies they have implicitly supported the social constructionist view of the importance of language. Prompted by their parents, children at the age of 18 months are already beginning to talk about emotions and causes (Oatley and Jenkins, 1996<sup>4</sup>), thereby not only learning to verbally communicate what they are experiencing, but also how to reconstruct – with their parents’ help – an event or emotion. They learn about the causes for their feelings, and they learn *what is appropriate or not and when*. Thus, already from a young age we are taught how to talk about emotions, and thereby implicitly learn that they can be regulated if deemed *improper*.

According to Griffiths’ (1997), however, it is only his proposed third emotion category ‘socially sustained pretenses’, which are to be seen as social constructions, and which, according to him, should not really be categorised as emotions at all. He gives

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<sup>4</sup> They use ‘internal states’ which is here taken to refer to emotional states.

examples of behaviours such as ‘being a wild pig’, where people in Gururumba, New Zealand, change their normal behaviour and become violent and aggressive. Griffiths argues that this is a form of emotional behaviour which “cannot survive the realization that they are merely our inventions” (1997:146), and therefore they are ‘pretenses’. This view, however, is not shared by LeDoux, who uses the ‘wild pig’ as an example of socially constructed emotion. He writes:

The Gururumba believe that being a wild pig occurs when one is bitten by the ghost of someone who recently died. As a result, social controls on behaviour are lost and primitive impulses are set free. According to Averill, being a wild pig is a social, not a biological or even an individual, condition” (LeDoux, 1997:115-116)

Griffiths agrees with Averill’s evaluation of the existence of ‘being a wild pig’ as an argument for ‘socially sustained pretenses’, which differs from ‘basic emotions’ and ‘higher cognitive states’. LeDoux, on the other hand, appreciates the social element in the behaviour, but also asks the very important question “*one wonders, though, where the wild impulses come from*” (1997:116), thus suggesting that this behaviour, which is understood as emotional behaviour by the cultures in which it occurs, is biologically based *as well as* socially constructed.

Griffiths’ (1997) re-categorisation of emotions is based upon how the different classes of emotions are explained. Prinz (2002) objects to this division, and argues that the two main opposing schools of theory are those of the cognitive and the non-cognitive. According to Prinz both theories are right in their own way, as each teaches us something about the nature of emotion, but he argues for a more “integrative approach” (Prinz, 2002:2) to solve this debate:

“Emotions have properties that push in both directions, properties that make them seem quite smart and properties that make them seem quite dumb. They exemplify the base impulses of our animal nature while simultaneously branching out into the most human and humane reaches of our mental repertoires” (Prinz, 2002:1).

Prinz’s characterises emotions as embodied appraisals. Emotions are embodied, as they are “inner responses to bodily changes” (Prinz, 2002:19). He accepts that subcortical

pathways play a role in emotion, and that activity there may be present before any cognition has taken place. But he argues that emotions are also appraisals, defined “as any mental states that represent an organism-environment relation that bears on well-being” (Prinz, 2002:20). Thus defined, Prinz argues that this explains how emotions can be linked to thoughts, but need not involve judgements in all cases of emotion.

Thus, it seems that basic emotions and other emotions all carry elements of biology as well as cultural influences, which may explain the discrepancy between which emotions are believed to be included in the ‘basic emotions’. The universality of emotions may be found in the biologically derived perception of external or internal states, but the cultural knowledge of the individual experiencing or witnessing the emotion highly influences the emotional experience and understanding. Returning to the James-Lange Theory, physiology aside, the question of whether we run because we are afraid, or are afraid because we run still stands. The cognitive appraisal of events spurred on a debate of the extent to which emotions or cognitions are primary. This debate is discussed below.

#### **2.4.4. The cognitive – non-cognitive debate**

The term cognition is widely used in psychology to refer to thinking and reasoning, as well as in connection with other ‘mental’ activities such as imagery, use of symbols, categories and schemata, etc. Within this thesis, the above definition of cognition will be used unless otherwise stated.

In parallel with the emotion research discussed above, the question of primacy of emotions rather than primacy of cognitions arose. In 1980 Zajonc argued that most contemporary psychology had ignored the evidence for emotions being primary. He quoted Wundt’s (1907) writings about how cognition comes after feelings, a very similar point to what Damasio<sup>5</sup> (1994, 1999) argued years later, based on neurological evidence. Wundt argued that:

“When any physical process rises above the threshold of consciousness, it is the affective elements which as soon as they are strong enough, first become noticeable” (Wundt, 1907, in Zajonc, 1980:152).

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<sup>5</sup> For full review of Damasio’s theories please see part 2.6.

Zajonc (1980) suggested that whilst cognitive psychology largely ignores the importance of affect in their theories, social psychology appreciates how affect influences most of the social decisions we make, and how some decisions are made without prior cognitive assessment, such as likes and dislikes. He argued that:

“the form of experience that we came to call feeling accompanies *all* cognitions, that it arises early in the process of registration and retrieval, albeit weakly and vaguely, and that it derives from a parallel, separate, and partly independent system in the organism” (Zajonc, 1980:154, italics in original).

Lazarus (1984), on the other hand, argued that cognitions always precede emotions. He stated that:

“Cognitive activity is a necessary precondition of emotion because to experience an emotion, people must comprehend – whether in the form of a primitive evaluative perception or a highly differentiated symbolic process – that their well-being is implicated in a transaction, for better or for worse... [and that] the transformation necessary to produce an emotion out of sensory states is an appraisal that those states are favorable or damaging to one’s well-being” (Lazarus, 1984:124, 126).

Empirical evidence from preference research formed the basis of Zajonc’s (1980) argument for the primacy of emotions. In studies investigating how much a participant liked a shown object – such as signs (Turkish-like words, Matlin, 1971; Japanese ideographs, Moreland & Zajonc, 1977, 1979), participants consistently showed a preference for signs that had been seen previously, even though they had no conscious re-collection of having seen them prior to the rating. Part of Zajonc’s argument was also based on his interpretation of findings in a range of other studies of attitudes, and impression formation. Festinger’s (1964) cognitive dissonance theory for instance, was re-interpreted by Zajonc to suggest that because of a lack of thorough cognitive evaluation before the decision was made, dissonance occurs because of *affective* dissonance. Lazarus on the other hand cites evidence for how intensity and other aspects of emotions alter following cognitive appraisal (Lazarus, 1968).

This debate is firstly a philosophical one about definitions and the difficulties of *ever* proving that cognition is or is not present before emotion. It is important here to

remember that Zajonc's (1980) statement applies to the first instance of the encountered object, and that he acknowledges that over time or with repeated exposures, cognitive appraisal and evaluation probably will take place. For instance, meeting someone the first time will elicit an emotional response, and we will perceive that person as largely pleasant or unpleasant. However, we may find that new information, or repeated exposures change our initial opinion (e.g. Damasio, 1999; Zajonc, 1984). This does not change Zajonc's assumption that an instant emotional, non-cognitive response takes place first, and that emotions are independent from cognitions. Secondly, the debate is also semantic. The problem with Lazarus' statement really is in how we define cognition, a point Zajonc (1984) made to Lazarus's earlier paper (1982), and how emotions are "squeeze[ed] ...into the traditional view of cognition – cognition as thinking and reasoning" (LeDoux, 1998:68) and to which LeDoux comments that "the essence of emotion has been altered in order that emotions could be conceived as reasoned thoughts about situations" (1998:68). By stating that appraisal is necessary to make sense of these sensory states, i.e. when cognition is defined not only as a mental assessment, but also as a primitive evaluation, then it becomes near impossible to argue that cognition does not precede emotion (Zajonc, 1984). The underlying problem thus is in our definitions of cognition and emotion.

The relevance of this debate is not so much who is right, but to highlight the philosophical problems as well as the semantic problems of definitions. The question – what is first, emotion or cognition - although an interesting one is perhaps the wrong question to ask. Rather one should perhaps ask about the *relationship between* emotion and cognition. As previously mentioned, there is clearly evidence for a relationship between the two - emotions can influence cognitions and vice versa. LeDoux (1998) criticised Lazarus, amongst others, for not separating cognition (as thought and reasoning) and emotion. He suggests that there are similarities:

"Conscious emotional feelings and conscious thoughts are in some sense very similar. They both involve the symbolic representation in working memory of subsymbolic processes carried out by systems that work unconsciously" (LeDoux, 1998:299),

and thus the relationship between emotion and cognition can be seen in how they both make use of brain mechanisms and systems that are inter-related. Yet they are separate

as the subsymbolic systems generating thought differs from those generating emotional feelings and

“emotional feelings involve many more brain systems than thoughts”  
(LeDoux, 1998:299).

An emotional experience, such as fear, must necessarily involve the amygdala, and it must be embodied, whereas appraisal of a situation need not lead to an emotional experience.

The previous parts have largely discussed emotions as a form of biologically derived entity – bodily feedback in the form of visceral changes or facial expressions. The next part will discuss how emotions are more than just a biologically derived concept.

#### **2.4.5. The social construction of emotions**

The basic emotions have been described as autonomous and short-termed responses, and there is relative consensus that these emotions are biologically based, and universal. But, as discussed, there are other emotions than fear, happiness, anger, disgust, surprise, and sadness. Another view is that of the social constructionists: emotions are constructed entities, constituted in language, and used as a tool for action relative to the present circumstances. Social constructionists have most often investigated emotions such as embarrassment, shame and guilt, which - although they can have a physiological component, such as blushing or paleing - are usually seen as in some ways different from the basic emotions. These emotions can be seen to act more as a form of social control, mirroring the morals of the particular culture, and reflecting the rules of social interaction. Emotions such as anger have however, gained much interest from a social constructionist point of view, especially with regards to self-concept (Thomas, 2003) and the rhetorical use of anger talk (Edwards, 1997). Landman (1996) argues that “the emotion rules differ significantly depending on one’s assigned place in the social order” (1996:89), for instance, different emotional rules seems to be applied for men and women, such as e.g. crying when sad. Social rules and norms range from committing crimes to not having table-manners (e.g. blowing one’s nose in one’s sleeve instead of a handkerchief). Adhering to social display rules “serves to present an actor as one who is cognizant of the relevant rules and conventions” (Goffman, 1967 in Parrott & Harré, 1996) and “the element of display is crucial”

(Parrott & Harré, 1996:53). The display acts as a communicator and says something about the person. By not showing embarrassment, for instance, in the breaking of social rules and norms, it conveys a message of social carelessness and uninhibited behaviour. Although the physiological signs of embarrassment, “the blush, can be neither inhibited or feigned” (Darwin according to Parrott & Harré, 1996:53), discourse involving reference to embarrassment, shame and guilt can be used instead, and is often deployed in talk as a “ritual opening for presenting an apology” (Parrott & Harré, 1996: 42). Social control in the form of emotion can be seen in how society ‘expects’ a particular emotional reaction after a particular event, such as remorse after committing a crime, sadness and crying following loss of a loved one, embarrassment or shame when caught doing wrong.

Thus, Griffiths (1997) sees the various emotion expressions, uses and understandings as un-explainable as long as they are all categorized as one. The Western cultures have perhaps adopted a Cartesian understanding of the human mind and body as two separated entities, and thus may have a tendency to view some emotions as ‘basic’, autonomous bodily functions, which can be explained by biological factors, and other emotions as cognitive, assessed and almost controllable, better explained by developmental, social processes. Other cultures, however, do not see the human distinguished by mind and body, but one entity where “the biological, physiological and psychic aspects of [man’s] nature cannot be clearly separated” (Read, 1967:206 in Heelas, 1996:180).

Seeing emotions as being embodied and also as social constructions could perhaps unify the concept ‘emotions’. Griffiths’ (1997) argument is based upon the fact that no one theory can adequately explain an underlying common factor in emotion. But if emotions are seen as something that is biologically derived, and takes place in the context of social interactions, based on cultural beliefs and morale, the gap between the biological and the social can perhaps begin to be bridged. Just because something is biologically based, it does not necessarily mean that it is not used actively to *do* something to and with an interaction. Edwards (1997) argues that emotion talk can be used as rhetorical explanations and motivations for actions, “in blamings, excuses, and accounts” (1997: 170). An emotion like ‘wild pig’ is understood in other cultures, even if the emotion ‘wild pig’ does not exist in itself, and it is also used and accepted in

much the same way as we in our culture uses embarrassment and shame, as an unintended loss of responsible behaviour. It is not only the display of emotions that can be seen as applying the rules of social behaviour. Taking a philosophical approach to the neuroscientific literature, Zhu & Thagard (2002) argues that:

“a certain emotional response to a situation is not only understandable but also *morally right*, in the sense that failing to generate such emotions and acting should be regarded as a moral defect” (2002:32, italics in original).

As stated before, anger and sadness have come to be regarded as basic emotions, which can be expressed and recognised in various different cultures. Interestingly though, according to Paul Heelas (1996), Davitz (1969) found that in comparing emotional experiences of anger, sadness and happiness of Ugandans and Americans, the Ugandans emphasised crying in all three emotions, whereas we in the West emphasise crying for sadness only. Another strong argument for the social construction of emotion comes from Catherine Lutz (1996), with regards to emotional gender differences.

Women are seen as more emotional, and are as children allowed to show more emotion (such as crying) than men, who in turn are seen as more rational. There is, however, a physical and physiological difference in reactions to displays of anger. One anger study found that men are more likely to express their anger, both physically and verbally, but argued that there seemed to be agreement that this was largely due to “gender role socialization... not biological sex” (Thomas, 2003:164). Mazurski, Bond, Siddle & Lovibond (1996) found that, compared to females, males had higher phasic skin conductance (SCR) when viewing pictures showing angry facial expressions of males versus adult females, compared to happy facial expressions. Females, on the other hand, had higher SCR to angry compared to happy faces independent of gender of the face. Both males and females responded more to adult faces compared to pre-adolescent faces. This can be explained both evolutionary and culturally as to who exhibits the greatest danger, and who - traditionally - is the ‘protector’ of the family. Along these lines, the findings of Kring & Gordon (1998) can also be explained, as they found that women expressed more facial emotion than men (measured by observation), but that their reported perceived experience did not differ. However, in the response to viewing film-clips showing sad, happy and fearful events, differences in skin-conductance were found. Males had higher reactivity to films showing fear than



females, although their reported experienced emotion level was the same. Thus, anger has both biological and social components (Damasio, 1999; Davitz, 1969; Edwards, 1997; Ekman, 1999; Heelas, 1996; LeDoux, 1998; Mazurski, Bond, Siddle & Lovibond, 1996).

Even if emotions are culturally influenced embodied states, there is one underlying common factor in emotion, which - even if emotions change across cultures, and possibly across age and gender - always will be present: the embodied neurological structures that enable emotion.

## 2.5. Emotions and the brain

Emotions have been an area of interest for people with backgrounds in classical philosophy, to physiology and psychology, and with the recent development of means to study the brain in detail, neuroscience. But while most researchers have studied the behaviour, the expression, the meaning and understanding of the words, not many have gone beyond what can explicitly be observed. Freud opened our minds to a whole new way of interpreting the human behaviour and mind, by suggesting that not all is accessible to consciousness, that some thoughts, dreams and memories are buried in the unconscious part of the mind. This was groundbreaking thinking, as before it had been believed that we were ourselves in control of our own mind, but with Freud's 'The interpretation of dreams' (1899) this belief was rocked. Although Freud believed emotions to be conscious (Prinz, 2002), the idea that emotions may not necessarily *always* be conscious, has recently been taken up by Damasio (1994, 1999), LeDoux (1998), and Gazzaniga (1998) and neuroscience has been developing tools and methods to look further into how emotions are enabled by brain structures.

Although emotions take place within contexts, this is not to say that emotions are just social constructs that only take place between people. Emotions take place within the brain-body system, not in one specific place but by means of neurological processes in various places, and these processes are often not conscious. Research has consistently shown that damage to some parts of the brain can have emotional as well as other effects. Split-brain studies have shown that the hemispheres have emotional connections, although the connection is not consciously known by the person. It has

been found, for instance, that although the identity of an object shown to the right hemisphere is unknown, the person is able to characterise the object as 'good' or 'bad', and Gazzaniga and colleagues (e.g. Gazzaniga, Fendrich & Wessinger, 1994; Holtzman, Sidtis, Volpe, Wilson & Gazzaniga, 1981) have consistently found evidence of non-conscious communication between the brain hemispheres. For instance, Gazzaniga (1998) gives an example of a woman shown a film about a vicious man to the right hemisphere. She could not tell what she had seen, but she reported that she felt scared and jumpy, but did not know why. These studies exemplify how emotions firstly exist within the brain, secondly are not necessarily conscious, and thirdly cannot necessarily be 'rationally' verbalised. It can also help explain why appraisal theories and studies, which made extensive use of self-reports were able to explain emotions as being consciously appraised, as for instance Lazarus (1984) who argued that cognition preceded emotion. It may also help explain Schachter & Singer's (1962) findings, in that even if we do not know the true cause and reason for our actions, we will nevertheless confabulate and try to find explanations for our behaviour and feelings.

The limbic system<sup>6</sup> is sometimes used as a term to denote a range of brain structures which are thought to be involved with emotion; structures such as the amygdala, the hippocampus, the parahippocampal gyrus, the cingulate gyrus, the fornix, and the thalamus (Adolphs, Damasio, Tranel, Cooper & Damasio, 2000; Bechara, Damasio & Damasio, 2000; Bechara, Damasio, Damasio & Lee, 1999; Canli, Zhao, Brewer, Gabrieli & Cahill, 2000; Critchley, Elliott, Mathias & Dolan, 2000). These structures of the limbic system is also involved in learning and memory (Carlson, 1992), and it thus becomes very difficult to pinpoint a single part or structure of the brain where emotion takes place. Emotions are complex processes involving various structures of the brain, and are interrelated with other processes such as cognition and perhaps also memory. It is however, possible to assess what happens in the brain by use of brain scans (fMRI, PET). Many studies have tried to isolate what structures of the brain are activated in different tasks, by different stimuli, and by comparing findings between healthy people and people with brain damage. Phan, Wager, Taylor & Liberzon (2002) conducted a meta-analysis of fMRI and PET scan studies of emotions to compare findings of which brain areas are activated in emotion processing. They also looked for whether or not

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<sup>6</sup> The limbic system is not a physical system as such, but is used as a concept to explain some specific processes (e.g. Damasio, 1999).

distinctions had been made between emotion and cognition, as many emotion studies both implicitly and explicitly have cognitive conditions such as “gender/emotional expression discrimination, emotional rating, picture/face recognition/encoding, naming, counting, autobiographical recall/imagery” (Phan et al, 2002:332)<sup>7</sup>. According to Phan et al., (2002) this cognitive function would be interacting with the emotional function and should therefore be accounted for in the analysis of the results of the PET and fMRI images. Their study comprised of 43 PET and 12 fMRI studies from 1993-2000 and looked specifically at activation in the brain, grouped as “(1) regions associated with Individual Emotion (fear, sadness, disgust, anger, happiness); (2) regions associated with Induction Method (visual, auditory, autobiographical recall/imagery; and (3) regions associated with presence and absence of Cognitive Demand” (Phan et al, 2002:332). What the review did not look at was if there was any differences in the ages of the participants, and what specific methods that were used in the studies (e.g. what type of material used in the induction studies, and what type of autobiographical recall). The results showed that although there was not a specific brain region activated by all emotions or emotional tasks, the medial prefrontal cortex (PFC) was generally activated. Other findings were that no overall distinction between cognition and emotional activations was possible, and that both emotional and cognitive tasks activated the anterior cingulate cortex (ACC). They did find that some emotions consistently activated particular areas of the brain: fear and the amygdala – in 60% of the studies the amygdala was found to be activated even when participants did not report to experience fear, but the stimuli was meant to be fear inducing; and sadness and the subcallosal cingulate in 46% of the studies. A cross-over of activated structures were also found: happiness and basal ganglia (in 70% of the studies) and disgust and basal ganglia (in 60% of the studies), and the amygdala especially was found to play a part in other emotions than fear. In 50% of the studies the amygdala was found to be involved in visual induction of other emotions, but rarely in the recall of emotions (in 7% of the studies). This suggests “that the amygdala has a specialized role in processing visual relevant emotional cues, signalling fear, aversiveness, or salience” (Phan et al., 2002:343). It has been found, however, in a study looking specifically at the amygdala, that it is especially involved in the processing of *facial* expressions, but

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<sup>7</sup> Note here that although they did not specifically define emotions, they implicitly in their experimental design of the meta-analysis relied on cognition not to be a necessary requisite for emotion. Had they made use of Lazarus’s definition, for instance, their distinctions between the studies would not have made sense.

not in the general recognition of emotions from other “social and contextual cues” (Adolphs & Tranel, 2003:1288).

Hariri, Mattay, Tessitore, Fera & Weinberger (2003) found that in having different tasks, either ‘matching’ or ‘labelling’ fearful/threatening pictures from the International Affective Picture System (IAPS) it was possible to differentiate between the perceptual and cognitive processing of the stimuli. The ‘matching’ – a perceptual process – was associated with activation of the amygdala, whereas the labelling – a cognitive process – was associated with attenuation of the amygdala and increased activation of the right ventral PFC and the ACC. In addition it was found that the skin conductance load in some participants increased in the ‘match’ condition, compared to the increase from baseline in the ‘label’ condition. The number of participants in which this occurred was not stated, and considering the overall small number of participants (N=11) the findings may need to be replicated. The mean age of the participants was 32, and again, it would have been beneficial to know the ages of those who differed in skin conduction level.

Supporting the findings of Hariri et al. (2003), Taylor, Phan, Decker & Liberzon (2003) found a greater activation of the amygdala in passive viewing of aversive emotional pictures from the IAPS, as compared to rating the stimuli as pleasant or unpleasant. Furthermore, subjective data, in the form of using adjectives from the Positive and Negative Schedule (PANAS) to rate their emotional state after each block of pictures, indicated reduced intensity of sadness after the ‘rating’ condition as compared to the ‘passive viewing’ condition. Gur, Schroeder, Turner, McGrath, Chan, Turetsky, Alsop, Maldjian & Gur (2002) found that when participants were exposed to pictures of facial expressions and had to discriminate between positive and negative emotion, the amygdala was activated, but not so much so when exposed to the pictures and asked to rate the person’s age (above or below 30 years). Research in recognition of facial expressions have shown differences in recognition of familiar and unfamiliar faces (e.g. Bruce & Young, 1986; Hancock, Bruce & Burton, 2000) with people being much better at recognising or matching familiar faces, almost regardless of the quality of the media used to show the face. Bruce & Young (1986) suggest that the information gained from the faces is not just relevant for the recognition itself, but defines seven “types of information...pictorial, structural, visually derived semantic, identity-specific semantic, name, expression and facial speech codes” (1986:305). The ability to ‘read’ a

face is thus related to the ability to characterise the emotional expression of the same face, and a number of brain studies have shown the limitations of this ability following certain brain damages. The amygdala is especially essential to our ability to recognise other people's emotional expressions, and damage to this part of the brain is especially detrimental to the recognition of anger, fear and to some extent disgust. Studies with babies have shown an innate ability to recognise facial traits – by the babies' preference to look at patterns resembling a face (Johnson 1991), and babies looking longer at their mother's face compared to looking at the face of a stranger (Bushnell 1989). "These studies of infants allow us to glimpse the intricate interplay between the innate organization of the brain and its astonishing capacity for perceptual learning" (Bruce & Young, 1986:253).

Many brain studies make use only of physiological and neurological data. The studies often feature emotion induction or recognition, and may thus, to the participant, seem very 'task' oriented. It is seldom reported whether or not the participants report 'feeling' the emotion, (to this authors knowledge, so far only with the exception of Damasio, Grabowski, Bechara, Damasio, Ponto, Parvizi & Hichwa, 2000; and Taylor et al., 2003) and whether or not is it perceived to be a 'natural' experience or similar to a natural occurring experience. It may be that the difficulties in distinguishing between the individual emotions' brain activity lies in the experimental situation, and that the brain processes thus inevitably will be involved in assessing the current situation as well as 'pure' emotional reactivity.

## 2.6. Damasio's theory of feelings and emotions

In Cannon's (1920) theory of emotion, he claimed that "voluntary assumption of an attitude seems to leave out the 'feeling'" (Cannon, 1920:282). However, one study in which participants rated comic strips with a pencil in their mouth, either forming their mouth in a smile or as a sour grimace found that those who were holding the pen between their parted lips, unknowingly smiling, rated the strips more fun than the ones not smiling (Strack, Martin & Stepper, 1988). Thus, both the *feeling* and the *perception* of the emotion seem to be important. How then, do we differentiate between emotions and is the feeling necessary for it to *be* an emotion?

According to Damasio (1999), the emotion is the underlying neural and chemical responses or patterns of activity in the brain, “largely in subcortical nuclei of the brainstem, hypothalamus, basal forebrain, and amygdala” (Damasio, 1999:79).

Emotions are not necessarily conscious, but are reflected in behaviour and actions. It is not until the point where neural activity generates a biological change related to body state and cognitive state that this neural activity can be perceived and thus *felt* as an emotion. At this point it can - though does not necessarily - become conscious.

Emotions are neither rational nor irrational but can influence rational/irrational behaviour and reasoning. They are not just something that the higher order mammals such as humans experience, but emotions are basic brain activity for all animals and organisms. According to Damasio:

“Emotions are about the life of an organism, its body to be precise, and their role is to assist the organism in maintaining life” (1999:51).

Damasio (1999) identifies three types of emotion: primary or basic, secondary or social, and background emotions. The primary emotions are based upon Ekman’s six basic emotions: happiness, sadness, fear, anger, surprise and disgust. The secondary emotions, such as “embarrassment, jealousy, guilt or pride” (Damasio, 1999:51) are influenced by thought, culture and society. The background emotions, such as “well-being or malaise, calm or tension” (Damasio, 1999:51) are often reflected in body language and can be observed or ‘sensed’ by others. Although secondary and background emotions are socially and culturally influenced they are still biologically based, just as the primary emotions are still culture bound.

Biologically, emotions have two functions: 1) to produce a specific reaction to a situation, i.e. a physical/biological response, such as approach or withdrawal; and 2) the regulation of body functions to enable this reaction, e.g. an increase of adrenalin. That “emotions are part of the bioregulatory devices with which we come equipped to survive” (Damasio, 1999:53) explains, according to Damasio (1999), the cross-cultural studies’ findings of universal recognition of the basic emotions and Darwin’s recognition of these emotions among different species. Damasio thus differs from Griffiths (1997) in that he argues that all emotions do share some characteristic, namely the biological aspect, and that even if there are differences, emotions can indeed be scientifically studied as one category.

According to Damasio (1999) there are three stages of emotional processing which can be understood as occurring along a continuum:

“‘a state of emotion’, which can be triggered and executed nonconsciously, ‘a state of feeling’, which can be represented nonconsciously [and] ‘a state of feeling made conscious’, i.e. known to the organism having both emotion and feeling” (Damasio, 1999:37).

Thus, according to Damasio, emotions are constantly existent, and can influence our behaviour without us knowing; only when the emotion reaches the ‘state of feeling made conscious’ will we be aware of it. Emotions can be induced either by sensory experience or by images of memories.

Damasio’s (1999) theory differs from other explanations of emotions, in that it is the neural activities that conjure emotions, which can become conscious, and not for instance the cognitive processing of an event that lead to an emotion. Although various emotions consistently can be seen as having the same pattern in specific areas of the brain, Damasio acknowledges that emotions, especially secondary emotions, can be socially and culturally affected, but does not really dwell on how this might affect his findings and theories. Damasio does however explain how the body can sometimes be ‘left out’ in the experience of emotion. Although emotions are embodied, they need not always include the body state. In what Damasio calls the ‘as if body loop’, the brain reacts *as if* the body has had the emotional body state. The ‘body loop’ “uses both humoral signals (chemical messages conveyed via the bloodstream) and neural signals (electrochemical messages conveyed via nerve pathways)” (Damasio, 1999:281). The changes in the body are represented in the “somatosensory structures of the central nervous system, from the brain stem on up” (Damasio, 1999:281). These neural patterns, once activated, influence other brain regions as well as the relevant body parts. The body loop is the connection between body and brain, which happens when exposed to either internal or external stimuli. The ‘as if body loop’ is a short cut which circumvents the body, and “the representation of body-related changes is created directly in sensory body maps...[and]... it is ‘as if’ the body had really been changed, but it has not” (Damasio, 1999:281). Furthermore Damasio suggests that

“the ‘body loop’ mechanism of emotion and feeling is of greater importance for real experience of feelings than the ‘as if body loop’ mechanism” (1999:294).

Prior to Damasio’s (1999) theory of emotion, the differences between emotions and feelings have been speculated upon. Ortony & Clore (1989), for instance, suggested that:

“the experienced feeling of an emotion is *part* of the emotion, but not the emotion itself. The emotion is the whole package, of which the feeling is a necessary but not sufficient component” (1989:127, italics in original).

Their view differs from Damasio’s, not in the use of the terms but in the underlying definition. For Ortony & Clore the feeling is necessary for the emotion, but for Damasio it is not. Damasio proposes:

“that the term *feeling* should be reserved for the private, mental experience of an emotion, while the term *emotion* should be used to designate the collection of responses, many of which are publicly observable” (Damasio, 1999:42, italics in original).

As the ‘feelings’ are the private, mental experience of an emotion then this would possibly be reflected in discourse of emotions, reflecting ‘the state of a feeling made conscious’. The ‘emotion’ would be seen in a physiological response, which would not necessarily be reflected upon, as it can be a non-conscious state. This has some support in the literature, not only in Damasio and colleagues own studies (especially Damasio, Grabowski, Bechara, Damasio, Ponto, Parvizi & Hichwa, 2000), but also in van den Hout, de Jong & Kindt (2000). They found that the SCR in phobic participants does not only increase when viewing masked presentations of pictures containing the phobic item compared to neutral pictures, but that it also is the case with words. The argument is that physiological arousal is not purely based on conscious significance evaluation and perceptual characteristics, but that significance evaluation can take place outside conscious awareness. This is also supported by Kring & Gordon (1998) who found that physiological measures do not always correspond to the participant’s own subjective ratings.



PET scans have shown that the patterns of brain activation for emotions are very distinctive according to which emotion is experienced (Damasio et al., 2000). For instance, the brain stem is activated when experiencing sadness, fear and anger, but where sadness also activates the hypothalamus and the ventromedial prefrontal cortex, fear and anger activates the amygdala. The amygdala in turn is not activated when experiencing happiness or disgust (Damasio, 1999; Damasio et al., 2000). However, this finding has not been exactly replicated in other studies, which have found that the amygdala is activated in most emotions, but only if they were visually induced (Phan et al., 2002), especially in passive viewing as opposed to rating the pictures (Taylor et al., 2003). The biggest problem with brain studies is the fact that the methods used (such as emotion inducers and measure of objective and subjective emotion reaction) are hugely different, making comparison and interpretation difficult.

### **2.6.1. Damasio's Somatic-Marker Hypothesis**

The Somatic-Marker Hypothesis is Damasio's explanation for how emotions and feelings are linked to reasoning. Patients with damage to the ventromedial parts of the frontal lobes have, according to the patients themselves as well as other close parties, reactions and behaviour which seem to be without emotions at all. According to the Cartesian view of how rational thought and emotions are opposites, one would have thought that having no emotions would then constitute rational behaviour, and thus be a good thing. Damasio and colleagues found, however, that these patients find reasoning and decision-making in personal and social matters quite impossible.

Damasio (1994) suggests that inherent in reasoning and deciding is knowledge about the situation, the possible actions and the immediate and future outcomes of each action, a

“knowledge, which exists in memory under dispositional representation form [that] can be made accessible to consciousness in both non-language and language versions, virtually simultaneously” (Damasio, 1994:166).

In some situations, the decision-making process is rapid and the response automatic, such as evading an oncoming object, whereas other situations call for a more elaborate

decision-making, such as investing money, or a career or marriage choice. Although these situations may seem to be dependent on different approaches to making the decision, Damasio argues that there is indeed a common base, namely the neurology – or the somatic marker.

If decision making was based solely on reason, every decision should involve a cost/benefit analysis of the possible actions and outcomes. For some decisions, such as evading an oncoming object, there is not necessarily time for this. For others, there are too many options for the mind to keep them all in the short-term memory, where the decision would have to unfold. What Damasio (1994) suggests is:

“that before you apply any kind of cost/benefit analysis to the premises, and before you reason toward the solution of the problem, something quite important happens: When the bad outcome connected with a given response option comes into mind, however fleetingly, you experience an unpleasant gut feeling” (1994:173).

The somatic marker thus “forces attention on the negative outcome” (Damasio 1994:173), thereby enabling the person to reject that option, and focus on the fewer remaining options, which do not have this ‘unpleasant gut feeling’. Somatic markers work the other way too, acting as an incentive to a given course of action. Thus, the reasoning and weighing of costs and benefits is not eliminated, but takes place *after* a pre-selection of alternative actions. Damasio does not, as previously mentioned, discuss how social and cultural influences on emotions affect his theory of emotions and feelings as such, but his somatic marker hypothesis is predominantly based upon social decision making, which in turn is closely related to cultural acceptable forms of actions.

## 2.7. Emotion and the psychological subject

As the preceding discussions of emotion imply, emotion is closely linked to our understanding and sense of ourselves as it is with “the emergence of a sense of self... [that] we can feel inferior according to our own internalised standards” (Lewis, 1993 in Oatley and Jenkins, 1996:91), and social comparisons of own psychological subject with others can lead to a range of emotions such as guilt, shame and embarrassment

(Harré & Parrott, 1996). Benson's (2003) notion of 'the unthinkable' is linked to how through our emotions we develop a sense of ourselves. He suggests that

"negative emotions [may] play a foundational role in the dynamics of those boundaries which constitute identities, be they personal identities or social identities" (Benson, 2003: 4).

When we act in a way, which we know we should not, or in a way which compromises how we view ourselves, we will feel guilt, shame, embarrassment, or even self-contempt (Benson, 2003). Benson distinguishes between what we 'could not do', and 'would not do, unless', where the latter is not so much guarded by negative feelings as perhaps lack of opportunities. It is the 'what we could not do' which shapes who we are, in the eyes of others as well as ourselves. Although it is helpful to distinguish the identity boundaries that define what people 'could not do', it may also be beneficial to look at how it makes people feel when they do something which they feel they should not have done, or fail to do something that they feel they should have done in order to comply with the cultural and social morality rules. Thus the 'could not' is the unthinkable, creating immediate

"feelings of revulsion and repulsion, feelings linked to the contempt, anger or disgust of others and subjectively transformed into feelings of self-contempt, fear, embarrassment, shame or guilt" (Benson, 2003:8).

The 'should not' and 'should have' may be the reflexive thoughts afterwards, through which we learn about ourselves and reconstruct who we are.

With regard to self-concept, Thomas (2003) found that the men in her study resented their anger, it made them feel like they lost control and they would more often than not feel as "uncomfortable and conflicted about anger as women" (160:171). Furthermore, they "worried about their adequacy in enacting the culturally presented anger management style for their gender... [as they] had no efficacious strategies" (160:171) to cope with the physical aggression which they had learned to adopt throughout childhood. The narratives used in Thomas' study did show, though, that as the men grew older they learned to manage the situations in which they previously had been angered, by looking at them differently or avoiding them.

There is also a relationship between emotion – both as display and feeling of emotion - and self-evaluation. This can be seen in how the same actions in different social contexts do not necessarily lead to feeling the same emotion. Parrott & Harré (1996) give a range of examples for how and when embarrassment occurs, and what that does to one's social character. To take the example of blowing one's nose on the sleeves, for instance, embarrassment may occur if this is done at the dinner table, but not if done whilst on a day-walk in the countryside, with no other means. The same is true for a range of other bodily functions. The underlying cause of embarrassment is when one's social role is altered either by doing something which others and/or oneself perceives to be outside the social norms and rules. Thus when social evaluation of oneself takes place and results in feeling of embarrassment, it can then sometimes be followed by decreased self-esteem (Parrott & Harré, 1996).

Another example of how our perception of who we are, is intimately linked with emotion and social expectations can be seen in how the concept of 'shell-shock' changed the way we as a society view our soldiers. Up until 1914 hysteria and neuroses were thought to be female reactions (Jensen, 1995), but then soldiers found themselves unprepared for a war fought in the trenches, and unexplainably broke down. Today our society accepts such a thing as post traumatic stress disorder, both among men and women, but in 1914 it was seen as highly unacceptable that a young able soldier could not 'compose' himself and be 'brave' (Jensen, 1995). This change in perception of mental health and illness illustrates how the emotional, embodied psychological subject is inextricably linked to the social. The soldiers who – un-intentionally – broke the social norms and rules for what makes a good soldier (being brave, able to fight unless deadly physically wounded, etc.) would suffer from guilt or shame as their reflection upon themselves would involve Benson's (2003) notion of the 'could not', whereas soldiers in today's society are *not* expected to not feel the impact of the witnessed travesties and are thus *morally* allowed a breakdown.

This changing understanding of the psychological subject can be seen in how people seem to "experience themselves differently now from how they did in the recent past" (Butt, 1999). According to Maslow (Gleitman, Fridlund & Reisberg, 2000), we allow ourselves to prioritise different things as we develop as a society as well as persons, and in Western cultures the individual has become prioritised. This, however, does not

*necessarily* mean that *emotions* have changed, but that their importance for the individual and within the culture may have changed. Concepts such as self, individual, subjectivity, personhood and identity are historical variable and socially constructed (e.g. Harré, 2002). Riesman (1989) suggests that with historical changes comes changes in our understandings or perceptions of what it means to be a person, and describes three types of societies each with their own understanding of the individual and its place within this society. In his sociological approach he first describes ‘the tradition-directed society, in which obedience to the cultural tradition of religion, routines, values, structures and relations is primary, and the individual is respected due to a functional membership of the society, not due to individuality of character. The social changes following the Renaissance and Reformation made way for the ‘inner-directed society, with advances in production, technology and also social mobility. The society became one of opportunities, demanding a social character capable of taking initiatives, seeking out new possibilities whilst at the same time adhering to the rules of behaviour and social position set forth by authoritative figures such as parents or governments. The idea of individuality is bounded with the ambition of society to strive for excellence, and the security of the individual is closely bound with guilt of not achieving what could be achieved. In Riesman’s third type of society, the ‘other-directed’ society, the individual is increasingly aware of other people’s attitudes and preferences, and the importance of mass-media and consumerism rises. The individual must be able to adapt to rapid changes of social and cultural preferences, and thus rather than potentially differing from contemporary peer-groups, the individual sets aside own preferences and needs.

By contrast, traditional psychological theories have tended to see ‘selves’ in realist terms as composed of “inner entities” (Edwards & Potter, 1992:128), although the role of the social impact on ‘self’ has not been neglected in psychology. Discursive psychology on the other hand suggests a relativity to the ‘self’ and considers

“what *activities* particular forms of self discourse make possible, and how a subject may be *constituted* on any particular occasion in talk or writing” (Edwards & Potter, 1992:128, italics in original).

Harré (2002) discusses 'selfhood' and suggests that there are two main "features of the sense one has of one's own singularity and uniqueness" (2002:184). One is the embodied being – the

"spatio-temporal centering of one's field of perception, including one's material surroundings and the state, condition and parts of one's own body... [The other] is the ever-changing totality of one's beliefs about oneself" (2002:184).

Thus, if ideas of self, subject, or personhood change according to historical, social, cultural and ideological changes, it is possible that the understanding of emotion and feeling also change. The possibility of this can be seen in that there already is some findings pointing towards a relativity of the feeling of emotion - Thomas (2003), in her study of men's anger, found that they learned to manage their anger, and Gross et al. (1997) in their studies found enhanced emotion control with age. And as Strongman argues:

"We construct our emotions through language, and these emotions are constantly updated and modified by language. The language is never stable, so no 'definition' will be found" (2003:290).

Changes in emotion can thus be due to changes in social, cultural and historical ideas of what it means to be a person. These ideas are closely bound to the discourses available, and changing ideas here influences our understandings of what emotion and feelings are. Changes in emotion can also be due to the growth as a person. The ability to control emotion is something that can be, to some extent at least, learned with age and experience.

## 2.8. Chapter conclusions

This chapter has argued that the nature of emotions might not need to be separated according to physiological, cognitive or social constructed aspects, but *if* a distinction should be made, it may make more sense to distinguish between the emotion and the conscious feeling of emotion as suggested by Damasio (1999). Although Damasio's work was based on neurological investigations, it seems perfectly transferable to other psychological investigations, and combined with some psychological theories it may lead to a better understanding of the concept and workings of the emotions.

Emotions are dependent on context. This does not mean, however, that they are just socially constructed, only that there will be cues and input from outside of the body which influences the emotions. Griffiths (1997) argued that because there can be said to be three categories of emotions, the emotion term cannot be unified. Damasio (1999), based on neurological explanations, argues that there are different levels of emotions, and that what we in lay-terms refer to as emotion, is the feeling of emotion made conscious, it is not until the emotion is felt, once it has entered into our awareness, or consciousness, that we know we have an emotion. Prinz (2002) does not make such a distinction, but suggests that inherent in the emotion is the information to be used in the cognitive skills of naming the emotion as being one or the other. The naming of emotions is presumably a socially and culturally learned skill, and thus the term 'basic' emotion signifies a socially constructed understanding that some behaviours or expressions are inherent, whereas other behaviours and expressions are learned. Given other evidence, it is here argued, that the different emotions can indeed be unified under the term emotion, but that a distinction should be made between the terms emotion and feeling, so that emotion is used to signify the process that takes place within the brain-body system – both non-conscious and conscious - and the term feeling signifies the feeling of emotion made conscious.

This is not to say that all emotions are universal. One could say that as the human brain is unique for humans, then 1) only humans have emotions, and 2) all emotions must be found in all humans. This is not so. Firstly, all animals do to some extent have emotions (Damasio, 1999; Darwin, 1965; LeDoux, 1998), but not all animals *feel* the emotion. Secondly, some animals other than humans do feel some emotions. For instance,

Ginsburg & Harrington (1996) questioned whether most animals would not feel satisfaction after having tended to their hunger or sexual drive. Thirdly, as the brain is not a finished product from birth, it is possible that some emotions are learned in some cultures, such as the wild pig, and other emotions learned in other cultures, such as *vergüenca ajena*<sup>8</sup> (Iglesias, 1996). Also, some emotions, like shame or guilt, may have one cause in one culture - e.g. Japan, not considering the family, or community first; and another cause in another culture, e.g. Western, such as feeling inadequate as an individual. That is not to say that these emotions do not also recruit neurological circuits.

That emotions are not just bodily grounded, but are also culturally and socially influenced can also be seen in the fact that emotion has now entered the school curriculum. According to *The Sunday Telegraph* “emotional literacy must be explicitly taught” and “Education inspectors at Ofsted now routinely monitor schools and nurseries for how well they promote pupil’s emotional and social development” (Henry, 2005:13). Thus, as the term ‘emotional intelligence’ becomes a layman term, the importance of knowing the essence of and difference between different emotion terms increases in all ages and in all spectres of the society. It can still be argued that an emotion is something bodily that should be controlled and managed, but it becomes increasingly difficult not to acknowledge that there is indeed a social and cultural side to emotions too.

To conclude, emotions exist within a brain-body system, which is influenced by cultural and social norms. When researching emotion it is beneficial to differentiate between ‘emotion’ at a neurological or physical level and emotion on a conscious level, which more accurately would be termed ‘the feeling of emotion’. Emotions are not irrational, although they can as all other brain-body functions malfunction, which is for instance what happens in phobias. They seek to preserve well-being, on a basic level for instance, by preparing the body for ‘fight or flight’, or by seeking pleasure, and on a social level by communicating emotion states to others. The communication can be both verbal and non-verbal. Behavioural communication can take the form of e.g. facial expressions, body-language, or action-oriented behaviour such as running. In verbal

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<sup>8</sup> *Vergüenca ajena* is a Spanish variation of embarrassment, referring to “vicarious or empathetic embarrassment” (Parrot & Harré, 1996:9)



communication, emotion can actively be used to perform a certain task, such as explaining, excusing or blaming (e.g. I did it because I was angry), as well as simply expressing the felt emotion (e.g. I am sad). Not all emotions need to be, or can be adequately expressed in words. Emotion and cognition is interlinked in that both can influence each other, and through the social re-appraisal of past<sup>9</sup> events, actions and emotions.

The working definition of emotion to be used in the following thesis is thus that emotions are complexes existing within the brain-body system, which is highly influenced by cultural and social learning. The feeling of emotion represents the *subjectively, reported and thus constructed* part of emotion, whereas emotion represents the physiological and neurological part of emotion which may be, but need not be consciously felt. Thus, the term *emotion* signifies *all* aspects of emotion unless otherwise stated, whereas the term *feeling of emotion* signifies the verbal reports.

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<sup>9</sup> Past can be just a moment ago as well as years ago.

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# Chapter 3: Ageing

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## 3.1. Chapter summary

The first part of this chapter introduces issues of ageing and emotion as well as the concept of healthy ageing. Research has found that emotion may influence cognitive processes and thus by knowing more about emotion, we can possibly help maintain better cognitive ageing. The second part of the chapter looks specifically at the ageing body and brain, and which functions and abilities are affected by the ageing process, with special emphasis on memory. The last part of the chapter discusses in detail some studies, which might shed light on the relationships between emotion and ageing.

## 3.2. Introduction

Research in ageing has covered a range of issues such as ageing of cells and neurons (e.g. Almaguer, Estupiñán, Frey & Bergado, 2002; Bird; Ostler & Faragher, 2003) successful ageing (e.g. Rowe & Kahn, 1987), sleep and memory (e.g. Hornung, Danker-Hopfe & Heuser, 2005), depression (e.g. Alexopoulos, 2005), brain structural decline (e.g. Toussaint, 2003), and cognitive ageing (e.g. Lindenberger & Baltes, 1994; Lindenberger, Scherer & Baltes, 2001). As the number of people reaching higher ages increases (in the Western world at least) and research funds into ageing become more available (Walker & Maltby, 1997), a new interest in *how* we age as well as *why* seem to have led to a shift in ageing research. Instead of seeing ageing as a debilitating, inevitable decline towards dying, there has recently been a move towards viewing ageing as a progressive development with emphasis on successful, healthy ageing. This move can be illustrated with an example of how a book on the psychology of human ageing from 1966, emphasizes the theory of disengagement, whereas the approach recently has orientated more towards action, engagement and enabling the older generation to remain part of society. The disengagement theory states that the elderly individual, due to declining physical and psychological abilities, should begin to withdraw from a wider range of social activities, thereby allowing the next generation to 'take over' and society to renew itself, leaving "the elderly ... free to die" (Bromley, 1966:142). In 1987, the term 'successful ageing' was coined by Rowe & Kahn, whose

model of successful ageing emphasized that the transition to old age need not involve disengagement and retirement from all social, physical and mental pursuits, but quite contrary should try to prevent the decline by continuing or beginning activities that prolongs physical and mental abilities. Rowe & Kahn (1987) suggested three points to be included in successful ageing – low levels of disability and ill health, high levels of cognitive function, and engagement with life.

Successful ageing is however, a social construct shaped by the same kinds of reductionisms and dualisms as is the case with emotions, thereby separating mind and body, individual and society, biology and culture. With the emphasis on the mind and on cognitive functioning, the body has been viewed almost as a necessary evil, and as separated from the soul (Burkitt, 1999). Thus, when the body starts to show signs of ageing, it is viewed as deterioration, an abnormality rather than a natural progression – a ‘disableness’ rather than an ‘ableness’ (Gilleard & Higgs, 2000). The term ageing carries with it a sense of negativity, something to be avoided. In Western culture ageing is associated with loss – loss of career, loss of independency, loss of competences and abilities, such as cognitive, sensory and sensorimotor abilities, and also loss of power (Whitbourne, 2002). Ageing is not seen as a norm, in our culture it is seldom viewed as gaining something, or even just as a shift of abilities. Ageing is seen as something that should be prevented and healthy ageing gains importance as a way to prolong the ‘normal’ state rather than begin deterioration.

This is exemplified in the ‘successful ageing model’ where, even if criticised, the body is seen in passing as needing to be healthy to enable the ageing individual to achieve successful and optimal ageing. Inherent in these terms is the belief that if there is a healthy, successful and optimal ageing, there is also an un-healthy, un-successful and un-optimal ageing. The usage of these terms shows the cultural shift in the understanding of ageing and in particular how individual responsibilities may uphold this understanding. For example, a textbook from 1966 describes how

“some elderly people stubbornly resist pressures put on them to reduce their commitments, to shed their responsibilities... [and] resists the idea of giving up an independent life and a private home” (Bromley, 1966:135-136).

By contrast, a textbook from 2002 indirectly states that the responsibility of a healthy ageing lies with the individual:

“The foundations for a successful old age are laid by lifestyles that maintain a healthy body and a healthy mind through good habits of nutrition, exercise and involvement in interesting activities that challenge the mind” (Schaie & Willis, 2002:106).

Thus, it seems that the full extent of how the moral dimensions of ageing impact upon individuals in our society, and their the implications for psychological welfare of the ageing population when social policies are based on terms such as healthy, successful and positive ageing, still remains to be researched.

However, regardless of how healthy and physically fit a person aims to be, the ageing process is inevitable. The biological age-related changes cannot be stopped or reversed, even in a society with the increasing availability of a range of organ transplants and cosmetic surgeries. Although some applied psychology research has emphasized the body and its functions, and dealt with more practical matters such as how to get around, avoid falling in the home, keep mobility and independence, much research has kept the body out the ageing equation for as long as possible, until the body becomes a ‘pain’, and despite how

“public policies contribute much to the social construction of old age, there is a strong perception in people’s minds that ageing is really a bodily affair” (Gilleard & Higgs, 2000:129).

In modern societies that have adopted the model of successful ageing of keeping mentally and physical active, ageing with respect to the body has frequently become focussed on looking young. Advertising of products to both men and women in the form of cosmetics to rejuvenate and regenerate the skin with vitamins and fruit extracts, along with vitamin supplements to ‘ensure’ a healthy body, the ageing body has regained its importance, but at the price of re-constructing what ageing is. Research has even begun the search for the ‘ageing-gene’ (Kirkwood, 2003) in the hope of prolonging youth, but as Hipkiss (2003) argues, ageing and death is important for our species and states that

“if a species did once evolve whose DNA replication and repair were 100% perfect... it would be rejected by natural selection because of its inability to tolerate the genetic changes necessary for adaptation and survival in an altered environment” (Hipkiss, 2003:1029).

This view is supported by Kenney (1989) who writes:

“If there were no deaths from trauma, and disease were totally eliminated, man would still die as a consequence of a reduced ability to maintain an adequate internal environment in the face of external environmental stresses” (Kenney, 1989:7).

Thus, even though social understandings of the ageing process may change, ageing is a natural process and “begins in the womb” (Leventhal, Rabin, Leventhal & Burns, 2001: 186). The biological, physical and neural changes that comprise the ageing process are not so much inevitable as they are a necessity for development per se, and so it has been suggested that the ageing brain processes should not be seen as declining, but as further developing of brain (de Magalhaes & Sandberg, 2005).

Age-related differences in sensory and cognitive functions are relevant for the study of emotions across the life span. As emotions are influenced by cues both from within and outside the brain-body system, a person is thus required to make use of multiple processes for the emotion to constitute itself as a feeling of emotion. If the optimal function of the various systems are influenced and overshadowed by each other, this would also presumably have an effect on the conscious experience of the feeling of emotion, and possibly also on the experience of emotions. Thus, before we look any further at age and emotion, a short introduction to some of the changes the ageing process brings will be presented.

### 3.3. The ageing body and brain

There are many theories of ageing, and as it is outside the scope of this thesis to review them all in depth, the issues that will be outlined here are those that can be generally applied to physical age changes. For the purpose of this research, it was of interest to look at the ageing brain and body as one entity. This, however, proved problematic as most research in ageing looks at separate aspects of the ageing process, although, recent studies have begun to look at a possible inter-relatedness between the declines in sensory, sensorimotor and cognitive functions (e.g. Li & Lindenberger, 2002). What follows is an attempt to shed light on the combined brain and body ageing, relevant for the emotion research. In doing so, the different issues will be looked at separately first.

There is consensus regarding a general loss of various functions and skills as a person ages, or a general deterioration of functions at all levels in most cells. Some cells are more affected than others, some re-generate themselves, and some are not affected at all (Kenney, 1989). The central nervous system (CNS), which consists of the brain and the spinal cord, connect to the body through nerve fibres. These transmit information either from the body to the CNS or from the CNS to the body. Outside of this system is the peripheral nervous system (PNS). This system is divided in two: The Autonomic Nervous System (ANS) and the Somatic Division. The Somatic Division transmits information from the sense organs (such as vision, smell, and hearing: changes to these functions will be highlighted in part 3.3.1.).

The ANS regulates and sends information to the brain about the viscera, and consists of two systems, the sympathetic and the parasympathetic. An activation of the sympathetic system

“leads to an acceleration of heart rate and inhibition of peristalsis (rhythmic contractions) of the intestines... and conserves heat... while parasympathetic activation... slows the heart rate and stimulation of peristalsis... and helps to exhaust heat” (Gleitman, Fridlund & Reisberg, 2000: 64).

The sympathetic and parasympathetic systems work together to regulate activity and survival. Where the sympathetic system’s function is to ready the body for action or

emergencies, the parasympathetic system aim to preserve and conserve the resources (e.g. slowing of heart rate and blood pressure, disposal of waste, and reproduction). Thus, when the sympathetic system is activated due to a threat, for instance, the deactivation of the parasympathetic functions means that the body will have further access to resources and thus better be able to handle the incidence, thus furthering the chances of survival (Gleitman et al., 2000).

As discussed in Chapter 2, the relationship between the ANS and emotion is debateable. Increased heart rate is typically associated with fear or anger, but Cannon (1920) argued that it was too slow to react to stimuli, and that many ANS responses to emotional stimuli were too similar to enable distinction between emotions. However, in 1983, Ekman, Levenson & Friesen found that some emotions have different ANS responses, and conducted in 1991 a similar experiment (Levenson, Carstensen, Friesen & Ekman, 1991) with old people (aged 71+) to see if their ANS responses matched those found in the younger people. They found, that while the patterns of the ANS responses were similar, compared to the younger people's ANS, the older people's ANS responses were attenuated. They favoured an evolutionary explanation for this, and argued that because the ANS is related to survival and reproduction, these functions are less needed as we age. It is generally believed that the ageing process' effect on the ANS means that there is a need for increased, prolonged, or intensified stimuli in order to elicit a response (Kenney, 1989). Although Ekman et al.'s (1991) study is interesting from the perspective of physiological arousal, it would have been beneficial had they also looked at whether the older participants reported attenuated *feeling* of emotion compared to their younger counterparts.

### 3.3.1. Somatic ageing

The sensory system's main objective is to provide information about both the body state and environmental effects upon the body. It provides us with pleasurable and unpleasurable sensations of smell, touch, taste, sound and sight, as well as sensations and information about body temperature and pain or potential bodily harm (the internal body state), and the physical and social (external) environment, which enable us to stay well and alive. It can roughly be said that the sensory system functions via the peripheral nervous system, which transmits the information to the central nervous

system, which then interpret these signals and reacts to them. Important for sensory experiences is the perception of them. The perception is an

“interpretation process that takes place in the brain as it integrates these signals with the individual’s past experience and information coming in from the various senses” (Whitbourne, 2002:263).

The difficulty of assessing changes in and efficiency of the sensory system is that it is largely dependent on the individual’s self-report, and thus dependent on the subjective perception hereof. It is, however, possible to assess the “functional efficiency of the sensory systems” (Whitbourne, 2002:265) by determination of threshold differences and indexes (how low a level of stimulation that can be detected) between the different age groups. There are several problems in comparing old and young people’s sensory systems. Firstly, people’s past experience, work etc. may have sharpened some senses (e.g. vision or hearing). Secondly, and perhaps most importantly, older people may be less willing to report a sensory experience until they are absolutely sure that they had it, thus raising the threshold due to other reasons than the sensory experience in itself. Perhaps most difficult in the study of the ageing sensory system is to determine the reasons for the potential sense loss – whether the cause is in the organs themselves, such as the eye or ear, or whether the cause is in the higher cortical processes - and hence to determine precisely what interrelationship there is between the sensory experience and the cognitive processing here-off (Whitbourne, 2002).

With these problems in mind, an overview of the different senses and body control systems and their main changes caused by ageing is given below:

### *3.3.1.1. Vision*

The structure of the eye changes with age, both in appearance and composition, but most importantly in visual abilities. It becomes harder to detect details, contrast and depth, and to discriminate between some colours. There is a diminished ability to adapt to constant changes in and flickering of light and the level of acuity is greatly diminished. There appear to be no gender differences as such, but men do have a tendency to report visual impairments less often than women (Campbell, Crews, Moriarty, Zack & Blackman, 1999).



### 3.3.1.2. Auditory

Age changes occur in all three levels of the auditory system (outer ear, middle ear and inner ear) both structurally and functionally. Especially for men, but also for women, this results in diminished hearing, particularly with regards to the sensitivity to high-frequency tones.

### 3.3.1.3. Taste and smell

Although the taste buds in the tongue do not change with age, the threshold of detecting taste does. Smell sensitivity decreases with age due to a shrinking area of olfactory receptors. Both taste and smell sensitivity is much dependent on other factors such as life-styles and the cognitive ability to differentiate and label the stimuli.

### 3.3.1.4. The somatosensory system

The somesthetic senses, sense perception or the somatosensory system, are used to gain information about touch, pressure and pain as well as about the external temperature. The system is aided by information from the vestibular system about balance and head movement and by the proprioceptive sense, or the sensory receptor, which detects the motion and position of the body by responding to internal stimuli.

There seems to be two contradictory trends in the research of the somatosensory system. One belief is that as we grow older, we experience more pain and aches, largely due to stiffness in the joints and muscles. The other is that the reduced sensory sensitivity found in the other senses is also found in the somatosensory system, leading to a lower experience of pain (Kenney, 1989; Whitbourne, 2002). Explanations for this discrepancy in findings have been sought in methodological differences of how to measure pain, and the differences between physiological measures and reported measures (e.g. Gagliese & Melzack, 2003).

There is general agreement that the vestibular changes in the inner ear are age-related and due to a loss of cells. This results in vertigo and dizziness, but this can and is often overcome by compensation from other sensory mechanisms, or worsened by the failure of these (Whitbourne, 2002). The proprioceptive sense is affected by age in the form of being less accurate. Furthermore, the balance and posture of the elderly are also

affected by a combination of loss of cells from the cerebellum and muscle weakness (Kenney, 1989).

#### *3.3.1.5. Physiological organ control*

It has been thought that the endocrine system, which helps maintain homeostasis in the body's organs, was, at least partly, the cause of ageing. Today, the majority of researchers do not believe it to play a major part in the ageing process as such, but rather that the subtle changes that occur, via their interaction with other changes, cause impairments in late adulthood (Kenney, 1989; Whitbourne, 2002). There is no general evidence of the digestive system being greatly affected by the ageing process in itself, rather changes in lifestyles and diet are the cause of any changes that may occur in late adulthood (Whitbourne, 2002).

Generally, the changes that occur in the sensory system following the ageing process are a loss of accuracy and a need for increased or intensified stimuli to elicit a response. There are some gender differences, such as different hearing loss in men and women, and there are some evidence that women have more health problems, such as chronic disease and disabilities than men (Orfilaa, Ferrera, Lamarcaa, Tebeb, Domingo-Salvanya & Alonso, 2006).

### **3.3.2. The ageing brain**

As all experiences in the body are communicated to and from the brain, both the changes in the body proper and the changes in the brain structure are important. Until recently it has been thought that as we grow older, our brains begin to shrink due to a general "loss of neurons throughout all regions of the brain" (Rutten, Korr, Steinbusch & Schmitz, 2003:351). It has recently been suggested, however, that the loss of cells due to ageing happens to specific types of neurons in particular regions of the brain (Rutten et al., 2003). According to Rutten et al. (2003) this loss of neurons cannot explain the functional decline of ageing, just as not all brain regions are affected by age (Lauria, Holland, Hauer, Cornblath, Griffin & McArthur, 1999). Alzheimer's Disease is the most common abnormal ageing of the brain, but it has been questioned whether it is an accelerated ageing of the brain, and therefore with time inevitable in us all (Anderton, 2002). However, the decrease of brain-weight ("largely due to tissue losses

in the white matter, which are accentuated in the frontal lobes”, Vinters, 2001:138), decreases of skull and cerebral hemispheric volume, and enlargement of the lateral and third ventricles are by many suggested to be suffering from large individual differences, and cannot be said to be “an inevitable consequence of aging” (Coffey, Wilkinson, Parashos, Soady, Figiel, Webb, Spritzwer & Djang, 1992, in Vinters, 2001:138). All the same, less blood flow, decreasing frontal lobes and neurochemical changes *do*, regardless of individual differences, occur in the ageing brain, and “there is generally a consensus that neurones in certain brain regions are lost with age, including those in the hippocampus, cerebral cortex, and amygdala” (Anderton, 2002:812).

Thus, the ageing process’ effect on brain and body is a general decline in functions. It has, however, been suggested that rather than perceiving the structural and functional changes as detrimental decline of the ageing person, there are strategies in place in which non-aged parts of the brain compensates for the aged parts. In a study by Gunning-Dixon, Gur, Perkins, Schroeder, Turner, Tureksky, Chan, Loughead, Alsop, Maldjian & Gur (2003) it was found that when processing facial affect, older participants activated different cortical regions, and more cortical and frontal regions than younger participants did. This was explained as an attempt to compensate for cortical networks being “less efficient” (Gunning-Dixon et al., 2003:285) and compensating for the “age-associated reduction in frontal volume” (2003:285). It is interesting that some of the brain structures that have been found to be activated during emotional experiences (e.g. the amygdala) are also affected by the ageing process. It is even more interesting, though, that the emotional experience does *still* occur, and that the brain regions seem to be compensating for each other. As will be discussed below, this compensation may also occur with regard to cognitive abilities, such as memory.

### 3.4. The ageing memory

Ageing does not just affect our body and brain on a structural and biological level, but also cognitive processes such as lessened attention, speed and timing abilities. One aspect that has been found to be especially detrimental is that of memory, perhaps because of the psychological affects it has when someone knows their memory is faltering. Not just the ability to remember past events clearly, or remember who was told what when, but everyday basic knowledge can also be forgotten. In tests for

cognitive impairment participants/patients are asked questions like ‘what is your name?’, ‘what is your age?’, ‘what is your address?’ as well as questions like ‘who is the prime minister?’, and ‘where are you now?’ (The Information/Orientation Cognitive Screening (TIOCS), Morgan, Dallosso, Arie, Byrne, Jones & Waite, 1987). Questions which for many people may be experienced as silly, or even insulting, as the level of one’s knowledge need not be high in order to answer these questions. Yet, some people will have trouble answering, and some will need time to think about each question and yet still be unsure of the answer. Other cognitive testing includes tasks of learning and retaining new verbal information, and abilities to work with letters, figures and different concepts (van Boxtel, Menheere, Bekers, Hogervorst & Jolles, 2004). A study from Valentjin, van Boxtel, van Hooren, Bosma, Beckers, Ponds & Jolles (2005) highlighted the importance of measurements of cognitive decline. They found a relationship between cognitive functional decline in visual and auditory tasks and sensory decline in vision and hearing, and emphasised the importance of not mistaking the *sensory* decline as cognitive decline in itself, but cognitive functional decline because of deteriorating sensory functions. This inter-relationship between sensory and cognitive functional decline has been suggested to either be due to a ‘common cause’ or to a ‘re-organisation of resources’. The ‘common cause’ hypothesis suggests that a biologically based factor can explain age-related differences in cognitive and sensory functioning (e.g. Anstey, Luszcz & Sanchez, 2001), although the exact biological factor causing the differences has not been determined. The ‘re-organisation of resources’ hypothesis suggests that the ageing individual seem to either compensate for a loss of cognitive or sensory abilities by using other cognitive and sensory functions, or to show a decline in functioning due to competing access to for the same available resources (e.g. Li, Lindenberger, Freund & Baltes, 2001). Considering the findings of Gunning-Dixon et al. (2003) (that older participants activated different cortical regions, and more cortical and frontal regions than younger participants when processing facial affect) with regards to emotional processing, it seems plausible that there is a general compensation strategy in which the ageing person can make use of other skills to compensate for lost abilities.

Although memory performance generally declines in the aged individual, there are differences in which aspects of the memory that is impaired (Balota, Dolon & Duchek, 2000). Memory can be categorised into two types – the implicit and the explicit.

Implicit memory is to do with what could be called learned behaviours and actions, such as how to do something, e.g. riding a bicycle (Balota et al., 2000), and functional imaging show little difference between brain activation of both young and old with respect to this kind of memory (e.g. Langley & Madden, 2000). Explicit memories are “revealed through intentional retrieval of a previous experience” (Balota et al., 2000:395), and can be either episodic (about a specific personal event) or semantic (facts, words, meanings). The cognitive screening test mentioned earlier (TIOCS) is a test relating to semantic memory. Generally, it is episodic memory that suffers most from the ageing process. There is general agreement that relatively few differences exists between old and young people with regards to sensory memory (visual, auditory and tactile) and short-term memory, but research consistently finds that older people struggle comparatively more than younger people on questions relating to long-term memory (both episodic and semantic), and that the most common difficulty is the ‘TOT’ – tip of the tongue syndrome. There is also evidence that more complex tasks involving “the storage capacity and manipulation of information in working memory” (Balota et al., 2000:400) become more difficult with age, although it is debated whether this has to do with attentional or working memory capabilities.

Anderson & Craik (2000) suggests that the memory impairment that occurs as we age is a combination of effects. They argue that the neurological changes lead to both ‘reduced attentional resources’, and ‘cognitive slowing’, and together this results in ‘reduced cognitive control’, which in turn impairs the memory performance (2000:412). It has also been found, however, that there is a clear difference in experimental situations. When looking at real-life compared to laboratory tasks, older adults seems to be on a par with, or better, than younger adults in keeping their cognitive control (Anderson & Craik, 2000). This may have something to do with having coping strategies in place in their every day life, which they cannot use in the laboratory settings. This would be supported by Li & Lindenberger’s (2002) suggestion of a multi-level model of cognitive and sensory decline. They argue that the “adaptations to functional loss may begin to occur in the form of neural reorganization and in the form of modifications to attentional allocation or processing strategy” (2002:782). These adaptations may in turn “initiate behavior-level modifications that lead to more permanent neural circuitry changes” (2002:782). These behavioural and neural changes may co-occur with the general neural decline, and may explain the aged

participants better coping strategies in real life situations compared to laboratory settings. These coping and compensating strategies are developed from early adulthood and onwards (Li & Lindenberger, 2002), not just for sensory functionalities but also for cognitive functions such as memory.

There are several stages in memory – such as encoding, storage and retrieval - where interferences are possible, such as lack of attention at the encoding stage, or interference of another memory at the retrieval stage. Although there is no proof that some memories are completely lost, or that all memories are kept forever, there are various explanations as to why it may seem that some memories have disappeared. It may be that the simple decay which takes place in the rest of the body, and the loss of white matter in the frontal lobes, also affect the structures of memory storage, or it may be that the problem lies entirely in the retrieval of the memory. As some memories are similar, and as we encode more and more memories, it might become a near impossible task, after a long period of time, to be able to retrieve the exact memory. Retrieving memories are often done in order to relay the event to someone else, where the retrieval of the memory takes the form of story telling. From investigating how people distort, add to, and subtract from events and actions when remembering a story they had read, Bartlett (1932) argued that people uses ‘schemas’ when they tell a story. Although there has been, and still is critique of schema theory, there is also a general acknowledgement that we make use of some form of “schematic structures” (Neisser & Libby, 2000) in our recall of personal stories. Neisser & Libby (2000) discusses the different types of episodic memory, and reiterates Bartlett’s suggestion that memories can be constructed, either because similar memories have become to seem as one, or altered by suggestion of what they call ‘implicit theories’ (2000:316) that people have about how something must have been.

As discussed in Chapter 2, emotion and cognition are closely related, and research has consistently shown that emotional states influence memory, both encoding and retrieval. Events with heightened emotion tend to be remembered more vividly, and laboratory studies have shown that learning material with some form of emotional content, or within an emotional context, are better remembered than neutral material. Negative emotion may concentrate the memory on the central parts of the events, thereby allowing less attention to encode the peripheral parts. This is for instance what

can happen in eyewitness reports where the witness remembers the gun, but not the face of the person holding the gun. The reliability of the memories however, is contentious and dependent on emotional content as well as the way and how often it is recalled. As Bartlett (1932) showed, memory recall is not infallible, and the recounted memory may draw upon other memories, schematas and beliefs as well. Flash-bulb memories is the term for vivid memories, such as remembering where you were, and with whom when something significant happened. Originally it was termed from the Kennedy assassination (Brown & Kulik, 1977), but it is used for any significant event of a social scale (e.g. 9/11, or the London bombings). The question of reliability of these memories has been questioned, and although it is not possible to check for accuracy, the consistency of the memory over time has been investigated. Generally, the details of the memory are consistent, and thus seen to be reliable, but it has been found that the emotional significance of the event matters if the consistency of the memory is to be retained over time (Schooler & Eich, 2000). Memory for traumatic events seems to be even more contentious. Some traumas are completely forgotten, whilst others are vividly and explicitly remembered. Reasons for this have been sought in brain structures, such as activity of the amygdala or hippocampus; in psychological processes, such as repression of the trauma; and also in the importance of retrieval cues in the remembering of traumatic events. While emotional memories seem to be more salient than other non-emotional memories, both in real life and in laboratory settings, there appears to be no single reason or memory structure that can explain why that is (van Giezen, Arensman, Spinhoven & Wolters, 2005).

It is not just with regards to content that emotion can have an effect on memory. A longitudinal study of 669 older participants found that although physical health was linked to cognitive functioning, psychological health was specifically linked to memory functions, and affective disruptions (such as depression or anxiety) were associated with impaired memory functions (van Hooren, Valentijn, Bosma, Ponds, van Boxtel & Jolles, 2005).

### 3.5. Emotion and ageing

As previously discussed, emotions are important in terms of health and well-being. In studies of ageing and well-being it has been found that there is a “relationship between perceived social support and health” (Kahn, Hessling & Russell, 2003:6). It was also found, however, that this relationship may also be dependent on emotions, more specifically level of negative affect. Thus, people with more negative affect may perceive their health, as well as their social relationships, as being less positive than people with more positive affect. Emotion has often only been an issue partly considered within ageing research or in studies of cognitive abilities, such as memory studies recalling neutral, positive and negative storylines<sup>10</sup>, although issues such as depression and anxiety and their causes and treatments have been studied in connection with ageing (e.g. Alexopoulos, Buckwalter, Olin, Martinez, Wainscott & Krishnan, 2002; Fountoulakis, Bech, Panagiotidis, Siamouli, Kantartzis, Papadopoulou, A. Papadopoulou, M., Kaprinis, Kourila, Iacovides & St. Kaprinis, 2006; Teachmana, 2006; Tuohya, Knussen & Wrennalla, 2005; Yaffe, Blackwell, Gore, Sands, Reus & Browner, 1999). Emotion research on the other hand has also largely neglected the study of older age groups, or even across age groups, but has concentrated on either developmental issues regarding babies, children and young people, or on specific emotions, such as fear or anger.

One group of emotion researchers, however, has concentrated on ageing and emotion, and has developed the Socioemotional Selectivity Theory (e.g. Carstensen, 1995; Carstensen, Isaacowitz & Charles, 1999; Gross, Carstensen, Pasupathi, Tsai, Skorpen & Hsu, 1997). The Socioemotional Selectivity Theory suggests that as we grow older we are increasingly looking for meaningful social interactions and with that a preference to remember or to be involved in positive emotional interactions rather than negative emotional interactions. According to this theory we have two reasons to engage in social activities, information seeking or emotion regulation, and these reasons are intimately linked to a person’s perception of end of life. Both in older people and in younger people who are nearing their end, it has been found that there is a tendency to regulate their emotions in order to achieve positive emotional

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<sup>10</sup> Possibly because of emotions own status as an aside to other psychological issues as discussed in Chapter 1



interactions. From a psychological point of view this theory is sensible, as we then strive to have meaningful relationships as we get older. Evidence for the theory has been found throughout a series of studies, such as age dependant decreasing recall of negative pictures (Charles, Mather & Carstensen, 2003); age dependant increase in positive reminiscing (Pasupathi & Carstensen, 2003), bias towards remembering emotionally salient material (Carstensen & Turk-Charles, 1994), and enhanced emotional control (Gross et al., 1997). Such research on emotion and ageing is often questionnaire based, for example Gross et al.'s (1997) study. In this particular study, the participants answered questions regarding their emotional experiences, how they express emotion, and their control of emotion. The questionnaires were sent and returned by post, and thus no further discussions between the researchers and the participants were possible. Although the design was sound and did consider both cohort and shared cultural assumptions of emotional reactions, the researchers were relying on culturally shared practices (such as answering a questionnaire in a standardised manner), and implicitly discounting any of the issues the participants might have had or experienced during the answering. These issues, such as the possible re-experience of the questioned emotion before or during the answering of the questions are also important in ageing and emotion research. Bodily feedback, the possible operation of somatic markers may influence how emotions are experienced, and the remembering of personal actions and emotional control and regulation in emotional situations might not occur with respect to a predetermined answer as they would in a real-life situation.

As briefly discussed in Chapter 2 the experimental design of the studies (and how emotion are defined) makes precise comparison across the findings difficult. But even so, there has been found a clear tendency for older people to report better control of their emotions and a preference for positive emotions (e.g. Mather & Carstensen, 2005). This selectivity is explained by motivational forces and by a tendency for the older people to spontaneously focus their memory on emotions instead on more perceptual details. However, research has shown that for non-emotional memory, older people compared to younger people have an impaired memory for perceptual details (e.g. Bäckman, Small & Wahlin, 2001). It is thus possible that because of a general decline in episodic memory, the memories are biased toward the emotional memory – positive/ negative, how it felt, what emotions, others or own emotional expressions, etc. – thereby making use of emotional cues to gain further access to the memory. As other

functions utilise compensation and re-direction of abilities, it is plausible that the memory function itself would draw on the emotional aspects of the memory in order to remember it.

### 3.6. Chapter conclusions

This chapter has reviewed some of the issues of importance when researching emotion across the life span. While there is no doubt that changes take place in the ageing body and brain, and that these changes are often of a regressive nature, it has also been highlighted that these changes need not be detrimental for the ageing person. The sensory decline has impact on the cognitive processes, and as Valentjin et al. (2005) pointed out, this does not necessarily mean that there is a cognitive decline taking place, but that the influences of sensory ageing lead to cognitive abilities being hindered – such as failing vision hinders certain tasks, only because the person simply struggle to see, not because of diminished mental abilities to do the task. This connection between declining functions and abilities influences what the ageing person can reliably *do*, and combined with the findings that older people need more intense stimuli as well as being reluctant to report sensory experiences until being sure it occurred (Whitbourne, 2002), has implications for conducting research with ageing people. However, research with ageing participants can be in danger of ‘un-healthy’ ageism by not taking into account how research in the separate areas of ageing has consistently found that ageing individuals are capable of transferring skills and compensating for functionalities that have declined by using other brain regions, sensory feedback, internal and external cues, and psychological skills. This ability to compensate for declining abilities within the brain-body system furthermore means that ageing need not be so detrimental for the health and quality of life of the ageing person, and thus ageing can be enhanced by accepting the shift in abilities.

The close relationship between emotion and cognition, not just in theoretical considerations, but in the brain structures as well, may mean that engaging in emotional activities has a beneficial effect on cognition as well as being engaged in cognitive tasks. Perhaps the remembering of past events can help the ageing individual in regaining some mental ground. There is reason to believe that just as thinking, talking or writing about an emotional event has health benefits (even when the event is a

traumatic one) (e.g. Pennebaker, 1993), so can engaging in reminiscing bring emotional benefits and lead to greater well-being (e.g. Pasupathi & Carstensen, 2003).

This thesis so far has drawn upon the existing literature to highlight the relationship between emotion, cognition and ageing. In the following chapters the study of emotion across the life span will be explained and the results discussed.

# Chapter 4: Methodology

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## 4.1. Chapter summary

This chapter describes the method and analyses used in the study. Details of the sampling, participants, equipment, questionnaires and the procedure will be given, and the analysis of both quantitative and qualitative data will be discussed. Summaries of the pilot studies conducted to evaluate the suitability of using the cognitive interview as a means to induce emotion and gain information about an emotional event, and the pilot studies investigating the use of International Affective Picture System (IAPS) and physiological responses (skin conductance level (SCL) are presented.

## 4.2. Introduction

This study was based upon the working definition of emotion put forward in Chapter 2. Preceding chapters have attempted to highlight the issues in emotion research, and the difficulties in studying all aspects of emotion. The methodology used here did by no means cover all, but it was hoped that by using a mixed methods design it would be possible to gain an insight to some of the aspects, and how they may interact. In using mixed methods it was hoped to follow that strand of mixed methods which aims to “provide better findings about our research problems than using either qualitative or quantitative approaches alone (Tashakkori & Creswell, 2007). As Harré and Crystal (2004) argues:

“We believe that a judicious combination of statistical analyses using data expressed in numerical form, and semantic and narratological interpretations can be a very powerful method of revealing the sources of regularities in psychological phenomena” (2004:61).

The mixing of methods is to some extent based upon the ideas of triangulation. Triangulation was first used by Campbell & Fiske in 1959 who in their investigation of psychological traits, made use of several quantitative measures to ensure that any variance was due to the trait, not the method (e.g. Rocco, Bliss, Gallagher & Perez-Prado, 2003; Tashakkori & Teddlie, 1998). Later in 1978, Denzin developed this idea

further and suggested how triangulation could be attained through “data triangulation, investigator triangulation, theory triangulation, and methodological triangulation” (Tashakkori & Teddlie, 1998:18), and in 1990 Patton

“described and gave examples of three triangulation methods: reconciling qualitative and quantitative data (across methods), comparing multiple qualitative data sources (within methods), and multiple perspectives from multiple observers (across different analysts of qualitative data)” (Tashakkori & Teddlie, 1998:42).

These second and third forms of triangulation have often been used in qualitative research as a means of ensuring reliability (e.g. Silverman, 2000; Willig, 2001).

There were certain issues to consider when applying a mixed method approach. In psychology quantitative and qualitative methods tend to be polarised, or at best qualitative data in a quantitative study is used as explorative but not conclusive in its own right, and quantitative data in a qualitative study (when existent) takes a verbal instead of a numerical form, such as ‘sometimes’, or ‘frequently’ (Hammersley, 1996). Some of the biggest issues with mixed method design are those of epistemology and ontology. Epistemology refers to the relationship between the knower and the known. Traditionally, quantitative researchers’ view was that there is an independent relationship between the two, whereas qualitative researchers believe the knower and the known are inseparable. It is noteworthy, however, that the awareness of semantics in traditional quantitative research has perhaps been brushed aside, although what has been referred to as ‘factors’ in for instance questionnaires, is based upon a semantic understanding and presupposing shared meanings (e.g. Harré & Crystal, 2004). On the other hand, the qualitative research with its disregard for non-linguistic issues by its “‘turn to language’ is in danger of becoming a retreat into language” (Clarke, 2004:82). Ontology refers to the nature of reality, and as discussed in Chapter 1 (part 1.2.1.) this is a much debated area, where traditionally the quantitative researchers see reality is a single, objective, given reality, whereas qualitative researchers who take a social constructionist or phenomenological perspectives believe there is multiple, constructed realities. Thus, if research is based upon the paradigms that guide the researcher, i.e. the researcher’s fundamental beliefs about ontology and epistemology, then the very nature of a mixed methods design can be said to be fundamentally against this researcher’s own beliefs. However, as briefly touched upon in Chapter 1, the end of the ‘paradigm

wars' saw the emergence of a more pragmatic approach where the potential findings of a mixed methods design is more important than an underlying worldview of any given method, and with this approach the rise of the mixed methods design. Over the years mixed methods have had changing connotations, such as mixing quantitative methods, or a mix of qualitative methods; but most often it has been used to refer to a design making use of both qualitative and quantitative methods (Tashakkori & Teddlie, 1998). Even though there has been a greater acceptance of using mixed methods, it is an area which until recently has suffered from lack of cohesiveness and definitions. Tashakkori & Creswell (2007) in the first editorial of a new journal of mixed methods, defined mixed methods

“as research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of inquiry” (2007:4).

The pragmatic approach is supported by Morgan (2007). He operates with the terms ‘Abduction<sup>11</sup>’, ‘Intersubjectivity<sup>12</sup>’, and ‘Transferability’, which he suggests could replace the traditional divide between qualitative and quantitative approaches. ‘Abduction’ takes the place of ‘Induction’ and ‘Deduction’, and relating data, findings and theories from both research approaches, it becomes an opportunity to find “useful points of connection” (2007:71), rather than being incompatible. ‘Intersubjectivity’ replaces ‘Subjectivity’ and ‘Objectivity’, which Morgan argues are only useful concepts for teaching purposes, but have little use in practise. ‘Transferability’ replaces ‘Context’ and ‘Generality’. Morgan’s pragmatic approach seeks to

“reject the need to choose between a pair of extremes where research results are either completely specific to a particular context or an instance of some more generalised set of principles” (2007:72).

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<sup>11</sup> With regards to the “connection of theory and data” (Morgan, 2007:71), Morgan’s (2007) use of abduction is as “*abductive* reasoning that moves back and forth between induction and deduction – first converting observations into theories and then assessing those theories through action” (2007:71, italics in original).

<sup>12</sup> Morgan (2007) argues that Intersubjectivity bridges the divide between ‘objectivity’ and subjectivity’, which he suggest are equally impossible to achieve. Intersubjectivity thus “represent the emphasis on processes of communication and shared meaning that are central to any pragmatic approach” (2007:72), and the pragmatic understanding of there being a “single ‘real world’ and that all individuals have their own unique interpretations of that world” 2007:72)..

It is important to note that it does not thereby become acceptable to use *any* method in *any* context, or claim that *any* specific finding is necessarily generally applicable, but to assess in each case whether our findings and knowledge can be transferred to other cases, *regardless* of methods used. The integration of data from qualitative and quantitative methods is not, however, necessarily easily obtained, even when a mixed methods design has been planned from the beginning. Bryman suggests that there can be “practical difficulties” (2007:9) which makes the integration of findings less possible. In an interview study with researchers having conducted mixed methods research themselves, Bryman (2007) found that most difficulties were found when trying to link the analyses and interpretations from the qualitative and quantitative, and the writing of a cohesive narrative. Eight ‘barriers’ were identified by the interviewees in this study: 1) ‘Different Audiences’, where the author would emphasise different parts of the study dependent on the audience written to; 2) ‘Methodological Preferences’, in which the researcher either have a greater belief in, or is more familiar with some methods over others; 3) ‘Structure of Research Projects’, where the emphasis one of the methods did not allow for integration; 4) ‘Role of Timelines’ in which one part of the research was completed earlier than the other, and pressure to publish meant the parts being reported separately; 5) ‘Skill Specialisms’, where a research team consists of both qualitative and quantitative researchers, which does not necessarily lead to an integration of findings in the final write up due to the differing perspectives; 6) ‘Nature of the Data’, where findings from either the qualitative or quantitative approach turned out to be more interesting, and thus subsequently became the focus of the write up; 7) ‘Bridging Ontological Divides’, in which the researcher’s underlying ontological approach, even if pragmatic as discussed by Morgan (2007), can still cause dilemmas in some areas; 8) ‘Publication Issues’, where the submission to certain journals is dictated by the journals’ emphasis on or prejudice towards qualitative or quantitative approaches. Based on the findings of these interviews, Bryman suggested one final barrier to the integration of methods – the ‘Problem of Exemplars’ which is the lack of a ‘best practice’ in mixed methods, i.e. there are no models or exemplary journal articles or studies which can be used as a template for new mixed methods research. These practical issues have also been highlighted by other authors such as Henwood (2004) and Brannen (2005).

Whilst there are many differences between quantitative and qualitative research, there are, however, also similarities. In Hammersley's words:

“There is no stark contrast to be found, then, between verbal and numerical data, or even between precise and imprecise, structured and unstructured, and contextualized and uncontextualized data. Rather, there is a range from more to less precise, more to less structured, and more to less contextualised types of data from which to choose. Furthermore, our decisions about what levels of precision, structure, and context are appropriate in relation to any particular study should depend upon the nature of what we are trying to describe, upon the likely accuracy of our descriptions, upon our purposes, and upon the resources available to us not on ideological commitment to one methodological paradigm or another” (Hammersley, 1996:162).

With these considerations in mind, this study used the resources available with the purpose of investigating emotions from a perspective that could encompass their different aspects. In an ideal world, this would have been a longitudinal study looking at brain structures, physiological responses, behavioural and verbal responses, but this was not feasible. Instead the methodology equally drew upon quantitative and qualitative methods in the belief that each can give us an insight to emotion and complement each other.

### **4.2.1. Validity and reliability**

Questions of validity and reliability are important for both qualitative and quantitative research, and as the above discussion has highlighted, the epistemology for qualitative and quantitative methods can be very different. Hence validity and reliability will be discussed separately for the quantitative and qualitative aspects of the method.

#### *4.2.1.1. The quantitative method*

Epistemology for the traditional quantitative researcher means that “the knower and the known are independent” (Tashakkori & Teddlie, 1998:7), and the ontology underlying the research is based on a single reality. This means that it is possible to aim to obtain ‘objective’ results. Reliability means that the measures taken would be consistent across several similar experimentations. Statistical tools, questionnaires, and other



assessments used in quantitative studies are developed with this in mind. In this study, reliability was ensured by the use of already tried and tested questionnaires, and use of equipment that had been used in prior studies of emotion. This was an important aspect of the methodology, especially because of the mixing of methods in studying emotions. One way of ensuring reliability and validity of a study is to copy an existing study, which allows a direct comparison of results. As this study was based upon a series of studies and theories, with different epistemological considerations, it was from the outset known that direct comparison across studies would be problematic. Hence, it was of great importance to choose measures, which were as reliable and valid as possible. The questionnaires used in this study are all prior used questionnaires in human emotion or age research or within different health settings. The pictures series used are extensively used in emotion research, and the physiological measures have been used in emotion research to measure physiological arousal as emotional arousal. Use of already reliable measures in quantitative research ensures external validity, i.e. that these findings can be generalized and found across different people, different settings, or different measures (Tashakkori & Teddlie, 1998). Internal validity refers to whether we can trust the results of our study and the 'objective' measures of credibility, such as for instance consistency with other previous findings. This way of ensuring validity was applied to the quantitative hypotheses posed in this study.

#### *4.2.1.2. The qualitative method*

Epistemology for the traditional qualitative researcher means that "the knower and the known are inseparable" (Tashakkori & Teddlie, 1998:10), and the ontology underlying the research is based on "multiple, constructed realities" (Tashakkori & Teddlie, 1998:10). This means that it is not possible to obtain 'objectivity' or generalize across findings and that the criteria by which reliability and validity was measured in the quantitative approach, does not apply to the qualitative aspects of this study. For instance, the concept of external validity as a means to being able to generalize across a range of people in different settings is of little value to the qualitative researcher, as the studies are "time- and context- bound" (Tashakkori & Teddlie, 1998:65). Instead some qualitative researchers operate with the term 'transferability' which "transfer conclusions/inferences from one context (specific setting) to another" (Tashakkori & Teddlie, 1998:66). Internal validity for the qualitative research are typically assessed by ensuring that the interpretation of the constructed reality is consistent with the

researched's interpretation. "The degree to which these multiple realities are 'defensible' to others... is *not* an integral part of ... internal validity" (Tashakkori & Teddlie, 1998:70). Ensuring validity in qualitative research also found by, for instance, the constant comparative method where "the qualitative researcher should always attempt to find another case through which to test out a provisional hypothesis" (Silverman, 2000:179). This method was applied to the narrative analysis, as each case built upon the findings in the previous case, and re-analysed in the cases that went before. The analysis also made use of findings from other studies, had repeated discussions about the interpretation of the narratives, and made use of recognised procedures for analysing qualitative data in order to ensure validity and reliability.

### 4.2.2. Subjectivity

"We need... to look at how the subjectivity of the researcher affects and interconnects with that of the researched" (Parker, 1999). As noted above issues of objectivity and subjectivity are contested within a mixed method framework, but whether these terms are meaningful or other terms such as 'intersubjectivity' (e.g. Morgan, 2007) are more useful, there is undoubtedly a relationship between the researcher and the researched in which a power relationship is inherent, and while the researcher's aim is to remain objective, the participant may still be influenced by the mere presence of another being. The interview situation itself may influence the behaviour of the participant, and their sense of self and the way they construct their subjectivity towards the interviewer. Riley, Schouten & Cahill (2003) in their explorations of the 'subjectivity and power between researcher and the researched' suggested that reflection upon this relationship leads not only to greater understandings of research experiences, but also "new understandings of our research topics themselves" (2003:61). This was an important point to consider in this present research. Firstly, to be aware as a researcher of the power relations, which in the interview situation was consciously given to the interviewee as 'the one with all the information', but reclaimed through the use of physiological measures and tape recording, which can be conceived to work as a constant reminder of the conversation being part of a research interview, but secondly, that the researcher and her construction of herself as a researcher, woman, PhD student, older than some, but younger than most of the participants, affected and influenced the conductance of the study and the analysis and understandings of the results.

The subjectivity of the researcher in relation to objectivity is however, not as straightforward in the case of mixed methods design. In a 'pure' design, the researcher's subjectivity is to some extent related to and informed by the beliefs underlying the epistemology and ontology of the research method itself. As discussed in the sections above, this can no longer be the case for the researcher undertaking a mixed methods design, as qualitative and quantitative research designs can draw from contrasting standpoints on the nature of knowledge. However, as Morgan (2007) suggested, the pragmatic approach may be where the mixed methods researcher can comfortably stand, believing in and being guided by the research question rather than the research method itself. Objectivity then becomes something to obtain through quantitative measures in the quantitative parts of the study, while in the qualitative parts the focus is on understanding the socially produced reality between the researcher and the researched. To take this position is, however, still not without its problems. From a personal point of view, as a research student undertaking this quest, there was many times when thoughts of having chosen a more 'pure' design – either qualitative or quantitative were prevalent. The difficulties that Bryman (2007) found researchers of mixed method studies experienced were also experienced here: although the analyses with few exceptions were kept apart, the integration of the findings posed challenges in the sense that there were limited guidelines for how to write up a thesis using mixed methods, and especially difficult to deal with, both on a practical and personal basis were how to present the study to an audience - how to convince an audience more inclined to quantitative research (or qualitative research) that the qualitative (or quantitative) findings in this study were relevant and, especially valid.

### **4.3. Aim of the study**

The aim of this study was to investigate whether the physiological and subjective experience of negative emotions differ across the life span.

Based on the Socioemotional Selectivity Theory which “predicts enhanced emotion regulation with age” (Charles, Mather & Carstensen, 2003:310) this study looked at whether there is a physiological attenuation in the emotion experience, and whether the regulation of emotion is expressed in autobiographical accounts of an emotional

experience. It has been found that “negative events are more salient and dominant than positive events... and that people react more strongly to negative than to positive stimuli” (Charles et al, 2003:321)<sup>13</sup>. Based on these findings this study looked explicitly at negative emotions, using two types of emotion inducers - viewing and rating of pictures and recall of an emotional event from autobiographic memory. According to the Socioemotional Selectivity Theory “older adults, compared with younger adults, are regulating their emotions effectively in ways that reduce the impact of negatively valenced experiences” (Charles et al. 2003:320). If this regulation is a purely ‘mental effort’ it may be that the physiological responses, as measured by the skin conductance level (SCL), will show the same increase in older and younger people, whereas their ratings of subjective measures (such as how affected they feel) may differ. If there is a physiological basis for why older people show increased emotion regulation compared to younger people, this may be indicated by a smaller increase in the older age group’s physiological response compared to the younger groups. The Socioemotional Selectivity Theory suggests that older people pay more attention to positive emotions, and place less importance on negative emotions, and thus it was of interest to see whether older people would report to be less affected by the pictures, rate the pictures as more positive, and talk about a positive event. As the pilot studies (all with younger participants) had showed a tendency for the participants to talk about a negative event, it was expected that most people regardless of age would chose to talk about a negative event, and age differences might then be found in the old age group having a more positive attitude to a negative event.

The main objectives to the study were to investigate potential differences between the old age group (age 65 years old and older) and the younger groups (ages 18-21 years old and 35-50 years old) with respect to subjective and physiological measures, as well as with respect to how emotion, emotional control, and psychological subject were constructed in their accounts. It was also of interest to investigate that if SCL indicates emotional arousal, whether comparing those participants with the highest and lowest increase from baseline to emotional stimuli could tell us something about emotions.

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<sup>13</sup> However, it has recently been found that when viewing a combination of negative, neutral and positive pictures, the increase in skin conductance is largest for the positive pictures (Hempel, Tulen, van Beveren, van Steenis, Mulder & Hengeveld, 2005).

With regard to the quantitative analyses, the hypotheses of the study were:

- There is a difference between the age groups' valence and arousal ratings of the pictures - the old age group will rate the neutral pictures as more positive, and the negative pictures as less negative, and rate their arousal to both neutral and negative pictures as less than the younger groups.
- There is a difference between the age groups' increase in SCL from baseline to emotional stimuli - the old age group will have less increase in the SCL from baseline to emotional stimuli.

A range of sub-hypotheses were constructed to orient the statistical analysis of the data to answering the main objectives and hypotheses:

- There is a positive relationship between the SCL measure and the rating of arousal
- The SCL measure is attenuated in older people compared to younger people
- There is a positive relationship between valence and arousal ratings in the age groups

Because of the sometimes tenuous relationship between physiological responses and affect (Lang, Rice & Sternbach, 1972) it was of interest to investigate what, if any, the relationships between emotional reactions (physiological and subjective) and the participants' positive and negative affect were.

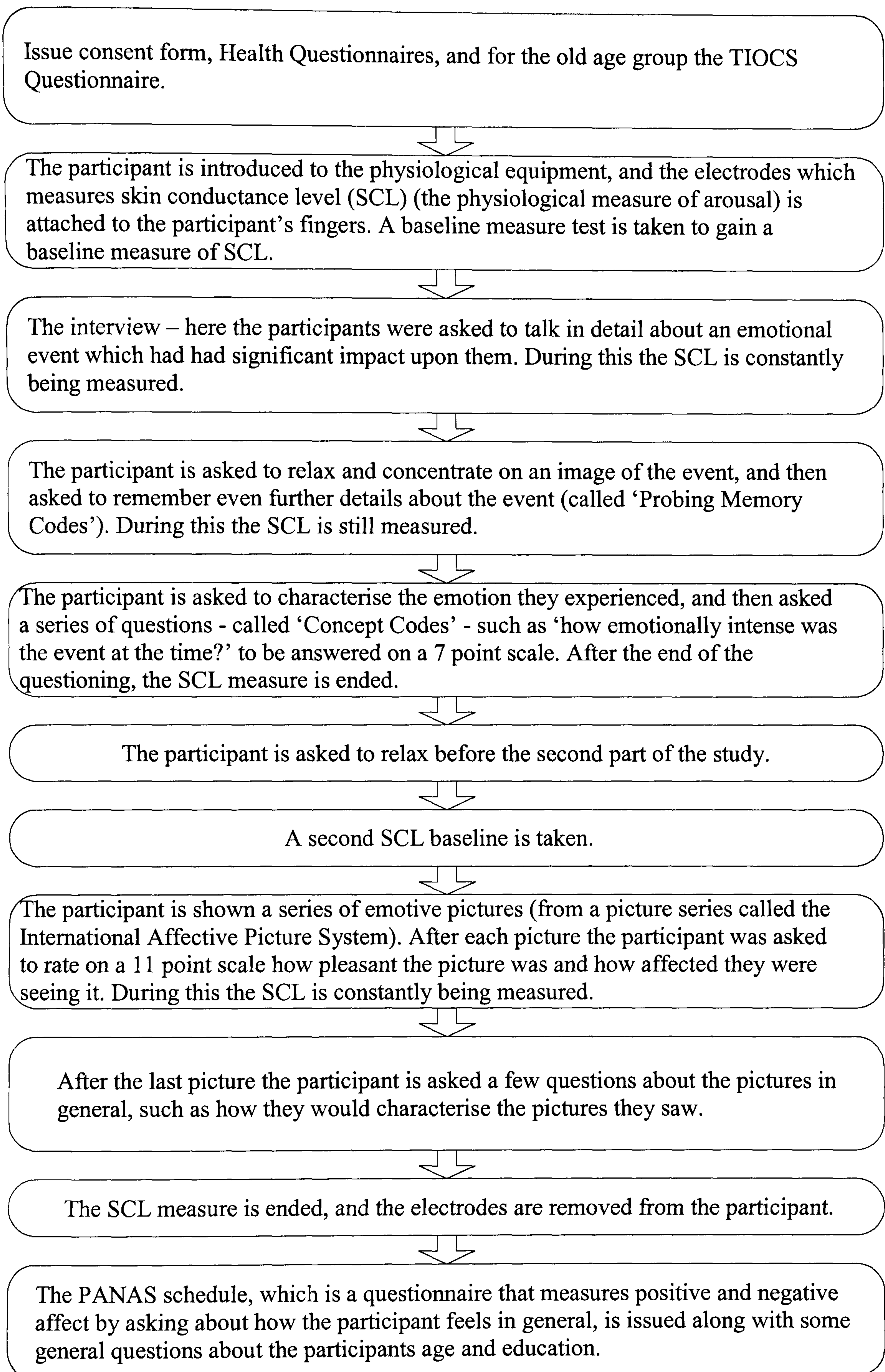
With regards to the comparison between the highest and lowest interview difference SCL scores no hypotheses were formulated as the objective was to investigate whether this score when compared to other measures could highlight any differences that could give us a deeper understanding of emotion. As mentioned above, there may be a tenuous relationships between physiological responses and affect, thus of particular interest would be whether the high and low interview difference SCL scores would show any differences in relation to positive and negative affect as measured by the PANAS.

As will be further discussed in part 4.5.5.2. it has been suggested that memories talked about in open recall will either be from recent past or from when the participant was aged between 10 and 25 years old, thus it was also of interest to compare differences and similarities between the age groups with regards to how long ago the event happened, and the participants' age when the event happened.

## **4.4. Overview of the study**

The design of the study enabled the researcher to collect both qualitative and quantitative data simultaneously. The study looked at the differences between three age groups; the youngest age group was 18-21 years old, the middle age group was 35-50 years old, and the old age group was 65+ years old. Using three groups enabled comparison between old and young, old and middle age, and young and middle age. The procedure was the same between and within all age groups, i.e. the groups were not counterbalanced with regards to having either IAPS or interview first. By interviewing the participants first it allowed for the participants' non-primed choice of event. The use of IAPS as an emotion inducer would have meant that the group viewing the pictures first would have been primed towards a negative event (Lang, Bradley & Cuthbert, 2001; Perrot, Goodenough & Champion, 2004; Taylor, Phan, Decker & Liberzon, 2003). Furthermore, the pilot studies had shown that participants viewing the picture series first reported to talk of an event related to how the pictures had affected them.

Before giving an overview of the study, a flowchart of the step-by-step procedure is presented. Please refer to part 4.4.1 for a fully detailed overview of the procedure.



**Figure 4.1: Flowchart of Procedure**

#### 4.4.1. Overview of procedure

The procedure was based on those tried and tested in the pilot studies (for summary of pilot studies please see part 4.6.).

The participant would first be asked to read the Participant Information Sheet (Appendix 1), and sign the Informed Consent Form (Appendix 2). These forms were available in bigger print. Then the General Health Questionnaire (Appendix 3 and part 4.4.8.3.) and the Health Screen Questionnaire (Appendix 4 and part 4.4.8.4.) was issued and answered. Elder participants would then be asked the questions from the Information/Orientation Cognitive Screening (Appendix 5 and part 4.4.8.5.). Anyone who did not fulfil the requirements from the different forms in terms of health would be thanked and dismissed. The participants were asked if they had any questions concerning the study, and it was re-iterated that they could end their participation at any time should they want to. There were two parts to the study, the interview and the viewing of pictures.

First the equipment would be explained, and the participants would be told what would happen during the course of the study. After being connected to the apparatus measuring the SCL (see part 4.4.5.1.), and in order to measure the SCL baseline, the participants were asked to talk about something neutral, e.g. how to make pasta, or how they would get somewhere (e.g. work or shop) from their home. After 5 minutes, they were asked to talk about a significant emotional event (please see interview protocol in Appendix 7). Once their account had ended, and any further probing questions, including the concept code questions (part 4.4.8.6.), had been asked, they were asked to sit and relax for a moment (5 minutes) in order to allow their SCL to decrease again<sup>14</sup>.

The second part of the study involved viewing and rating the picture series. After being told what would happen, and what they should do (please see IAPS protocol in Appendix 8), a second SCL baseline was taken, and then the picture series was run. Four pictures were shown to introduce the participant to the procedure before the picture series proper began. Once the picture series had been shown, the participants were asked questions about the pictures. The participants were then asked to fill in the

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<sup>14</sup> Many studies uses less time in between conditions, 5 minutes resting time between conditions are used in e.g. Hempel et al, 2005.



Positive and Negative Affect Schedule (PANAS) (Appendix 6), as well as answer some personal questions about age, gender and education (Appendix 6). The participants were then debriefed.

#### **4.4.2. Ethical considerations**

Prior to recruitment the ethical considerations of the study were put to the Ethics Committee of Loughborough University, and clearance granted. The considerations included the safety and intrusiveness of using physiological measures, and a protocol for use of the equipment was developed and approved by the board. Furthermore, due to the nature of the study it was advised to have information on various help groups and counselling available should it be requested after the study.

#### **4.4.3. Sampling**

The young and middle age participants were predominantly recruited from university students and staff. The older participants were recruited through existing databases of people who had previously participated in studies in the Department of Human Sciences, and also through local groups such as Age Concern, and University of Third Age. Through the local community centre, the library, and word of mouth both old and middle age group participants were recruited.

At first it was only the old age group who received compensation for their time, but because of the length of the study (more than one hour), it proved difficult to recruit people in the young and the middle age group without compensating them for their time as well.

Due to the nature of the study it became clear that there would be some form of bias with regards to who would want to participate. For all groups many of those directly approached would decline once they were told that they had to talk about something personal. Many of those who did participate seemed to find it either interesting to participate in a study of emotions, or find relief in being able to talk about their experience with an 'outsider'.

To establish consistency of the sample all were asked questions about how often they had previously talked and thought about the event, and when that last was, as well as how often, and where, they might have seen the pictures, and how they would characterise them.

#### 4.4.4. Participants

60 participants took part in the study. For reasons such as misunderstandings of the nature of the study and the changing of mind, four datasets were discarded. Due to faulty equipment (the Physiolab would occasionally stop measuring halfway through a session), a further three participants were discarded as no physiological measures were available for them, leaving a total of 53 participants. Of these, two participants have measures from the IAPS, but not from the interview (one from age group 1, one from age group 2). 15 physiological measures from viewing IAPS (all from age group 1) were lost following a computer hard-disk failure<sup>15</sup>.

The 53 participants were distributed as follows:

**Table 4.1: Distribution of participants in terms of age, sex and measures taken**

	<b>Males</b>	<b>Females</b>	<b>Total</b>	<b>Mean age</b>	<b>SD</b>	<b>SCL Interview</b>	<b>SCL IAPS</b>
Age group 1 18-21 years old	N=11	N=11	22	19.1 years	0.89	21	7
Age group 2 35-50 years old	N=6	N=9	15	39.0 years	3.80	12	13
Age group 3 65+ years old	N=5	N=11	16	73.6 years	6.38	15	15

<sup>15</sup> As only 7 of the young age group had physiological measures from viewing the IAPS, it was initially the intention to repeat the study with new participants. However, as the data were analysed it was found, as the results will show, that there was no reason to believe that the findings would be markedly different by adding more participants. Due to other considerations, such as money, equipment and access to the laboratory, it was decided not to recruit further participants.

## 4.4.5. Equipment

The study involved measuring physiological responses, viewing of negative and neutral pictures, and audio-recording of the interview.

### 4.4.5.1. Physiological measures

Skin Conductance Level (SCL) was measured with the I-330-MiniC2-GP (J+J Engineering Inc, Bio-Medical Instruments Inc, USA). The electrodes were connected to an isolated preamplifier and so to a data collection system, in this case online to a computer. The signals were sent to the programme Physiolab (J+J Engineering Inc, Bio-Medical Instruments Inc, USA), which was installed in Microsoft Windows. The Physiolab enables the data to be stored and managed for each participant. Once the sensors had been placed, a sensor test was run to ensure the signal was working.

SCL measures the electrical signals produced by perspiration on the surface of the skin. Two small electrode discs were strapped to the skin surface of two fingers (one on each finger) on one hand so that the perspiration on the palm of the hand can be measured. Surgical tape was used to strap the electrodes to the fingers, which were first wiped with antibacterial wipes. A very small current passes between the electrodes, which is in no way harmful and cannot be felt. The more perspiration on the palm of the hand the more conductivity will be achieved, which is reflected in an increased SCL.

### 4.4.5.2. The International Affective Picture System (IAPS)

The IAPS was developed by the NIMH Center for the Study of Emotion and Attention, University of Florida, to provide a standardized set of visual stimuli to research emotion (Lang, Bradley & Cuthbert, 1997; Lang & Öhman, 1988). The series consists of more than 700 colour photographs of a neutral, negative and positive valence and a range of arousal. Each picture has been rated for valence, arousal and dominance over the course of 10 years to provide population norms and enable researchers to choose pictures, which reliably induce positive, negative or neutral affect. Most of the ratings were provided by American college students, although a small sub-sample was also rated by children aged 7-14 years old (Lang et al., 2001). No older adults were used in the normative ratings.

The pictures shown in this study consisted of 28 pictures, 14 negative pictures and 14 neutral pictures, and were based on the pictures used in Taylor, Phan, Decker, and Liberzon's (2003) study. The negative and neutral valence was determined from the normative ratings (Lang et al., 2001). The experimental design was based on the guidelines from the IAPS manual (Lang et al., 2001) and the studies of Taylor et al. (2003) and Cuthbert, Schupp, Bradley, Birbaumer & Lang (2000). The task consisted in viewing a picture and then rating it for valence and arousal before viewing the next picture. The pictures were shown on a computer screen (standard VDU display). The computer screen was placed on a moveable table, which would be moved in front of the seated participant. The distance between screen and participant was approximately 45 cm (based on Taylor et al., 2003). The pictures were shown via a Microsoft Office PowerPoint show. Each picture was shown for two seconds, and each rating scale was shown for four seconds. Pictures 1 to 4 (2 negative and 2 neutral) were used as a practice set, enabling the participants to get used to the procedure (Lang et al., 2001). The participants were asked to rate them as they would in the experiment proper, but these scores did not form part of the analysis. Before and after the trial pictures a blank screen was shown for 15 seconds before the other 24 pictures were shown. The pictures used were (in order of showing): 2190, 3071, 7950, 3140, 2200, 3100, 3170, 5530, 3062, 2850, 3130, 7500, 3051, 2570, 2480, 5531, 2270, 3110, 3230, 2890, 9570, 9253, 1670, 9420, 3400, 7207, 2870, 9300. The negative pictures showed scenes such as burn victims, murder and rape victims, a starved dead dog, mutilations of body parts, and faeces in a toilet. The neutral pictures showed natural scenes (such as mushrooms, a cow in a field), a multicoloured piece of clothing, people looking out the window, sitting on a car, a pair of teenage twin boys; all people had neutral facial expressions. Although the pictures are *types* of pictures, which can be found in the media, exposing these particular pictures outside of a research situation dilutes their effectiveness as standardised stimuli, and they are therefore not reproduced in this thesis.

Following Taylor et al. (2003) the ratings of valence were made verbally (though the rating scale was shown on the screen) on an 11 point scale from -5 (extremely unpleasant) through 0 (no preference) to +5 (extremely pleasant). The ratings of arousal were also made verbally (and the rating scale was shown on the screen) on a six point scale from 0 (not affected at all) to 5 (extremely affected). The participants were

instructed to look at the computer screen at all times, to look at the picture, and to try to experience the content of the image.

The participants' SCL was measured while they viewed and rated the pictures. To ensure that the measure would be taken from the beginning of the picture viewing a device was made to connect the two mice operating the computer showing the pictures series and the computer operating the Physiolab respectively. Thus, when they were connected and one mouse was clicked, the other mouse would click at the exact same time.

#### *4.4.5.3. Tape recording and minidisk*

The interviews were audio-recorded on either tape or minidisk. The quality of the tapes was, however, not very good and made transcription of the interviews rather difficult. The minidisk was overall better than the tape, as it seemed to be less distracting for the participants (the microphone was much smaller, and there would be no pauses to turn the tape over).

### **4.4.6. Questionnaires**

This section gives information about the questionnaires that were issued to the participants, and the questions asked at various points in the study. Please see the flow chart in part 4.4. for the order of when the questionnaires were issues, at during which part of the study the questions were asked.

#### *List of questionnaires*

- Participant Information Sheet (Appendix 1)
- Informed Consent Form (Appendix 2)
- General Health Questionnaire (Appendix 3)
- Health Screen Questionnaire (Appendix 4)
- The Information/Orientation Cognitive Screening (Appendix 5)
- Concept Code Questions
- IAPS Questions
- Positive and Negative Affect Schedule (PANAS) (Appendix 6)

#### 4.4.6.1. *Participant Information Sheet*

This gave complete information of the nature of the study and what the participants would be asked to do during the study. Please see Appendix 1 for the full information sheet.

#### 4.4.6.2. *Informed Consent Form*

This was to ensure that the participant had read and understood the Participant Information Sheet, and was to be signed to agree to participate. Please see Appendix 2 for the consent form.

#### 4.4.6.3. *The General Health Questionnaire (the GHQ)*

The GHQ12 (Goldberg, 1978) is an extensively used questionnaire employed in different health settings, and was used to ensure a comparable psychological health of the participants, as well as ensure that no participant would be unduly at risk. The participants completed this questionnaire before the interview commenced, immediately after they signed the consent form. The interviewer scored the questionnaire before beginning the interview, and if anyone scored above the cut-off point of 8, they were excluded from the study. Please see Appendix 3 for the full questionnaire.

#### 4.4.6.4. *The Health Screen Questionnaire*

This questionnaire was developed by Loughborough University to be used with all studies of humans to ensure that their health is sound and there will be no risk to them due to their participation. The participant answered this before the interview commenced. The interviewer checked the questionnaire before beginning the interview, and if any questions were answered in a way that caused concern, the interview would not take place. Please see Appendix 4 for the full questionnaire.

#### 4.4.6.5. *The Information/Orientation Cognitive Screening (TIOCS)*

All participants from the old age group was asked the questions from The Information/Orientation Cognitive Screening (TIOCS), a questionnaire developed for the Nottingham Longitudinal Study of Activity and Ageing (Morgan et al., 1987), based on the Clifton Assessment Procedures for the Elderly (C.A.P.E.). The questionnaire screens for level of cognitive impairment, and has 12 questions relating

to personal and social issues such as ‘How old are you?’ and ‘Who is the Prime Minister?’ Each correct answered question scores a point. Scores between 10 and 12 are unimpaired. For this study question 2.15 ‘What is the address of this place?’ was omitted as the study took place at the university, and the participants could not be expected to know this address. Having omitted one question the scores for unimpaired changed to between 9 and 11. In order to be able to make comparisons with the younger groups, it was decided not to include anyone who did not score a minimum of 11. Please see Appendix 5 for the full questionnaire.

#### 4.4.6.6. The ‘Concept Codes’ Questions

For this study it was of interest to explore how the participant experienced the feeling of emotion and if there was some subjective detectable difference in how they remembered the emotion, to how they felt at recall. Based on a study in tunnel memories for autobiographical events (Berntsen, 2002), four questions concerning intensity of the emotion at the time and at recall were asked. The questions and the rating scale were shown on a piece of paper one at a time, and the participants were encouraged to talk about why they would rate it as they did. These questions had dual functions. Firstly they generated a score between 1 and 7, which could be used for quantitative comparisons both within and between subjects. Secondly, they were used as prompts for the interviewee to take notice of how the emotion felt now (immediately after/during the interview) compared to then (when the event took place) and to reflect upon this.

The questions were asked after the participant had recounted their emotional experience and were as follows:

- How emotionally intense was the event at the time?  
*1 = no detectable emotion*  
*7 = the most intense experience I have ever had*
- How emotionally intense is the event at recall?  
*1 = no detectable emotion*  
*7 = the most intense experience I have ever had*

- How emotionally negative was the event at the time?

*1 = no detectable emotion*

*7 = the most negative experience I have ever had*

- How emotionally negative is the event at recall?

*1 = no detectable emotion*

*7 = the most negative experience I have ever had*

#### 4.4.6.7. The International Affective Picture System (IAPS) Questions

After each picture was shown, the following rating scales would be shown and the participant asked to rate how pleasant or unpleasant they found the picture, and how much it had affected them:

Extremely Pleasant					No Preference					Extremely Unpleasant
+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5

Not affected at all									Extremely affected
0	1	2	3	4	5				

The following questions were asked after the viewing and rating of the pictures. The questions were developed during the pilot studies, as it became apparent that any pre-exposure to this type of pictures might influence the ratings, and would thus be important to know. On the same note it was of interest to know the media through which any exposure had taken place, and how often, if ever, it had occurred. The questions were as follows:

1. How would you characterise the negative pictures you saw?
2. How often have you been exposed to this type of pictures?
3. Where did you see them?

#### 4.4.6.8. The Positive and Negative Affect Schedule (PANAS)

The PANAS consists of 20 questions, of which ten measure negative affect and ten measure positive affect. The PANAS measures an individual's disposition to view



oneself and social events with a positive or negative mood state. Dependent on instructions, it assesses if this is a general state or something experienced in the past year, the past few weeks, the past week, the past few days, today or at this moment (APA, 1988). For the purpose of this study the participant was asked to ‘Indicate to what extent you generally feel this way, that is, how you feel on average’ by using a 1-5 scale ranging from ‘very slightly or not at all’ to ‘extremely’. The questions were like these: ‘Generally I feel interested’, and ‘Generally I feel distressed’. Please see Appendix 6 for the full questionnaire.

The scores are added from each category (negative - NA or positive - PA) and ranges from 10 to 50. Watson, Clark & Tellegen (1988) have compiled population norms based upon the scores of 663 students. Table 4.2 below shows the mean scores and standard deviations of the PANAS scale population norms:

**Table 4.2: PANAS standards**

	<b>Mean</b>	<b>SD</b>
<b>Positive Affect</b>	35.0	6.4
<b>Negative Affect</b>	18.1	5.9

#### *4.4.6.9. General Information Questions*

After answering the PANAS, the participants were asked to answer general questions concerning their age, gender and education. Please see the questions in Appendix 6 after the PANAS.

#### **4.4.7. The interview procedure**

The interview procedure was based on the cognitive interview, which was developed initially for police interviews of eyewitnesses. The technique emphasises the interviewee’s participation in the interview as the one with all the information; information that the interviewer cannot necessarily know exists, or cannot gain access to unless the interviewee elicits the information. The technique makes use of open-ended questions, un-interrupted narratives from the interviewee, and probing questions into the images and concepts the interviewee has told of in the initial narrative of the event (Fisher & Geiselman, 1992). The most important features taken from the cognitive interview were:

- Establish rapport
- Transfer control to the interviewee
- Report all details and all thoughts
- Activation and probing of images

These elements are meant as specific aids to enhance the memory by allowing the interviewee uninterrupted access to their memory, by setting the context for the event and probing into the images activated.

This interview technique thus makes use of open recall as opposed to targeted recall, which makes use of cues or specific situations, and has a much stricter question protocol. Although the questions were directed towards an emotional event which had had significance for the narrator, the recall was not guided to a specific situation, time, or towards an event with a specific emotional significance.

The interview protocol (see Appendix 7) was developed as a guideline for the interviewer to follow. The *Introduction*, the *Open-Ended Narration*, and the *Probing Concept Codes* were strictly followed, to ensure a degree of standardisation to the interviews. The protocol was *not* read out, as this might have alienated the participants, but was used as a tool with notes to follow, memorized and conveyed to the participant in a conversational manner. The probing of *Memory Codes* was dependent on the flow of the interview and the participant. It is important to mention here that questions orienting to how the participants talked about the event, and questions probing the images consisted of visual questions such as ‘if you concentrate on that image, what can you see’, aural questions such as ‘what can you hear’ and kinetic questions such as ‘how did that feel’ were asked. The protocol ensured that certain questions were asked, but the main part of the interview questions were based upon the individual story, and the flow of the conversation.

The participant was specifically *not* asked to tell of an either negative or positive event, but of an emotional event with significant impact. If the participant chose to talk about a positive event, he/she would be asked to tell of a negative event as well. If a negative event was chosen first, the interview would end after this account, as it was the negative narratives that was of interest for this study.

The interview was audio-recorded and transcribed. Notes of the interviewee's demeanour, behaviour and comportment during the interview were taken, to aid the later narrative analysis.

## **4.5. Data analyses**

The health questionnaires were scored before the study proper took place in order to ensure that no participants were included who would be at risk. No participants were excluded from the study on these grounds.

The data from all the questionnaires and the subjective ratings from the interview and IAPS were coded. Positive and Negative Affect were calculated according to the manual. Verbatim transcriptions of some interviews were carried out by the researcher and some by a professional company: these were carefully checked for veracity by the researcher.

Quantitative analyses were carried out using SPSS. All quantitative data was first entered into a Microsoft Office Excel Spreadsheet in order to have an electronic workbook with all the data. All that could be coded and quantified from the interview was also entered into this workbook. This allowed the researcher to get an overview of data from both interview and pictures for all age groups as well as the individual groups.

### **4.5.1. Skin Conductance Level (SCL)**

The Physiolab programme allowed data management and most of the data was first worked with in this programme before transferring it to Excel and SPSS. Due to equipment failures some data was lost, and some data was retrieved in incomplete form and could not be managed in Physiolab. Physiolab calculated the mean SCL of interview baseline, interview, picture baseline and pictures. These means were later transferred to Excel and SPSS. The retrieved data was transferred to SPSS where the means of interview baseline, interview, picture baseline and pictures were calculated.

The SCL mean for each group was calculated at baseline (before the interview), during the interview, baseline (before viewing the IAPS pictures) and during the pictures. Scores indicating the difference between baseline and picture-viewing/ baseline and interview were also calculated (Levenson, Carstensen & Gottman, 1994).

### 4.5.2. Questionnaires

All the questionnaires were coded where appropriate and the data entered into Microsoft Office Excel.

### 4.5.3. Interview coding and categorisation

The interviews were transcribed and assigned to one of four categories: 'loss', 'trauma', 'other', and 'positive story first'. These categories were not pre-determined, but were based upon the content of the narratives collected. The interview also made use of some rating questions (the concept code questions), which were entered as numerical data. Other questions, like 'how often do you think/talk about it' were first entered as a verbal summary, and later coded for statistical analysis (Never=1, rarely=2, sometimes=3, often=4, very often=5). These codes were typically already used in the verbal statements, such as 'I rarely talk about it', which is then coded as 2.

The scores for how long ago the event took place were coded as follows:

1	1-6 months
2	7-12 months
3	1½-2 years
4	2½-5 years
5	5½-10 years
6	10½-15 years
7	15½-20 years
8	20½-25 years
9	25½ -30 years
10	30½-35 years
11	35½-40 years
12	40½-50 years
13	50½+ years

#### 4.5.4. Statistical analysis

Statistical analyses were conducted in order to investigate relationships between the variables, and differences between the age groups.

##### 4.5.4.1. Correlations

Correlation coefficients show the relationship between two variables and gives information about the slope of the regression line (positive or negative). Before any correlational analyses took place scatterplots were created and checked for linear relationships, and outliers were investigated.

Correlations were calculated for the relationship between the subjective ratings of valence and arousal for both the neutral and the negative pictures from the IAPS. It was of interest to see whether level of valence (how pleasant or unpleasant a picture was rated to be) was associated with level of arousal (how affected the participant would rate him or herself to be when viewing a picture).

Before comparisons between different types of scores were made, the scores were converted to Z scores, thereby ensuring compatibility between the scores (Howitt & Cramer, 1997).

The relationships between the scores of the subjective ratings of the concept codes (see part 4.4.6.6.) were also analysed, as were all other scores to ensure no relationship before submitting them for analysis of variance.

To gain greater understanding of the physiological data, the sample was divided into two groups – ‘High SCL’ and ‘Low SCL’. These groups were based on the interview-difference score (interview mean minus baseline mean, taken from Levenson et al., 1994). From each group, the 10 participants with the highest SCL increase and the 10 participants with the lowest SCL increase were selected, and potential relationships within this sample were analysed.

#### 4.5.4.2. ANOVA

According to Howitt & Cramer (1997) analysis of variance is suitable for comparison of “two or more groups in terms of their mean scores on a dependent variable” (1997:191). Furthermore they note that “it is *not* necessary to have equal numbers of scores in each group” (1997:192). In this case we had three age groups consisting of 22, 15 and 16 participants respectively. The variance between the groups’ mean scores is calculated by assuming the ‘null hypothesis’ – that there is no relationship between two variables, and by obtaining a ‘true’ and an ‘error’ score for each of the groups from which the variance ratio test (*F*-ratio) is conducted. Scores taken from a ‘null hypothesis based population’ holds that variance in the scores are due to errors, not real differences. Thus, if the variation of the ‘true’ scores is greater than the variation of the ‘error’ scores, we can assume that the scores are not from a null hypothesis population and the alternative hypothesis – that the variance is due to ‘true’ variation in the population, not ‘errors’ – is provisionally accepted. For instance, in this present research, if the variation of the scores between the three age groups is greater than what would be due to error, or chance, we provisionally assume that there is a ‘real’ difference between the groups’ scores.

One way ANOVAs were carried out to compare the groups’ mean scores of valence and arousal when viewing the IAPS pictures. One way ANOVAs were also carried out to analyse the variance between the groups’ scores on PANAS, subjective ratings of the concept codes (see part 4.4.6.6.), as well as scores on how long ago the talked about emotional event took place and the participants’ age when it happened. With regards to the High/Low SCL groups’ scores on the PANAS, a one way ANOVA was carried out to analyse potential differences between the two groups and the normative score.

With regards to SCL differences between the groups, ANOVA was used to determine whether the baseline measures differed significantly between the groups. As this turned out to be the case, ANCOVA was used rather than ANOVA.

#### 4.5.4.3. ANCOVA

The analysis of covariance (ANCOVA) is based on ANOVA and linear regression. For the purpose of this study it was used in the analysis of the SCL differences between the groups, to partial out the effects of the baseline (the covariate). SCL has been found to

be attenuated in older people (Levenson et al., 1991) and so the measure of SCL at baseline and at emotional stimulus works like a pre-test/post test condition.

Furthermore, initial analysis of the data found linear relationship between baseline and interview. The ANCOVA works by adjusting the means for all the groups – the grand mean – so that the analysis of variance is based on equal means. Any ‘true’ variance found between the groups is thus expected to be due to group differences rather than the possible effects of baseline differences (Dancey & Reidy, 2004; Howitt & Cramer, 1997).

#### *4.5.4.4. Post hoc tests*

As the analyses were conducted hoping to find differences between the groups, it was of interest to investigate between which groups the potential differences were. The post-hoc tests that would be most strict and conservative, and thus less likely to accept differences between the groups, were used. In the case of the ANOVAs a post hoc test of multiple comparisons was used to assess which groups differed from each other. The test chosen was Tukey HSD – Honestly Significance Difference. In the case of the ANCOVAs, a post hoc test of pairwise comparisons was used to assess which groups differed from each other (Dancey & Reidy, 2004; Garson, 2006).

#### *4.5.4.5. Paired samples t-test*

The paired samples t-test compares two samples of correlated or related scores. It was of interest to analyse whether the increase in SCL from baseline to interview, and from baseline to viewing IAPS were statistical significant. For all groups a paired samples t-test would determine this.

#### *4.5.4.6. Pre-tests*

Before all statistical analyses, the scores were checked for their shape of distribution through looking at histograms, to ensure that the use of the parametric tests introduced above would be appropriate (Howell, 1995; Howitt & Cramer, 1997). ANCOVAs were used to look for potential gender differences in the sample.

### 4.5.5. Narrative analysis

Narrative research is understanding experience as lived and told stories, and for the purpose of this study, we were interested in looking at personal narratives of past events, which the participants themselves perceived as having been emotionally significant. Narrative psychology often investigates issues like self and identity, issues of which emotion forms an important part. As Murray (2003) states:

“Narrative is concerned with the human means of making sense of an ever-changing world. It is through narrative that we can bring a sense of order to the seeming disorder in our world, and it is through narrative that we can begin to define ourselves as having some sense of temporal continuity and as being distinct from others” (Murray, 2003:111).

In this study the narrative analysis was informed by discourse analysis; as the underlying belief was that narratives are made for a reason. There is no such thing as an objective, neutral narrative. In Potter’s own words:

“The simple point is here that people do not produce descriptions out of the blue; they produce them for what they can do in some stream of activity.... it is produced on this occasion *for this occasion*” (Potter, 1996:4, italics in original).

Thus, in this study, the narrative analysis is used to capture the dynamic, relational and social nature of emotions.

Based upon guidelines from especially Crossley (2000), but also from Gergen (1998), Gergen & Gergen (1986), Murray (2003), Riessman, (1993) and Silverman (2001) a narrative procedure (see also Appendix 9) was developed to answer the research question – ‘Does emotion change across the lifespan?’ To keep focussed on this question, further questions specifically related to the participants were posed – ‘what am I trying to understand’, ‘what are the participants trying to say’ and ‘why are they trying to say that’. The narrative analytic categories were not predetermined, but were constructed, refined and validated throughout the analytic process. The narratives provided such rich information, that the overall research question was kept as a guide for what specifically to look for.



Murrey (2003) suggests using two phases in the narrative analysis: a descriptive followed by an interpretive to connect the narrative with the broader theoretical literature.

Initially in the descriptive phase, a summary of the themes and sub-themes, or plots, are identified. It is then advised to look at the narrative structure, the narrative content and context. Different authors' have slightly different interpretations of and suggestions to what to look for in the structure, but there seems to be general consensus (e.g. Crossley, 2000; Gergen & Gergen, 1984 and Murrey, 2003) to base the analysis on the following: progressive, regressive or stable structure of the narrative; narrative tone; use of metaphors, images and symbols; and rhythm (such as constructing chronology, e.g. Toolan, 2001). The principles of the 'Threefold classification scheme', is suggested by Gergen & Gergen (1986) as a means to classify narratives according to the narrator's outlook, and the narrative can be described as being either progressive, regressive or stable. The progressive narrative is a positive evaluation of the event, a moving forward and learning from what has happened. Contrasting this is the regressive narrative in which there is no positive outcome or outlook, and things just gets worse. The stable narrative can be described as "a narrative that links events in such a way that the trajectory remains essentially unchanged with respect to goal or outcome. Life simply goes on, neither better nor worse with respect to the conclusion" (Gergen, 1998:1). As Gergen (1998) points out, most narratives can be categorised as either of these, or a combination thereof, and according to Murray (2003), narratives can be categorised as progressive, and stable/regressive and stable/routine more so than 'just' progressive, regressive and stable. Gergen & Gergen (1986) notes that the three classifications can be combined in a number of ways within a single narrative. Thus, the narratives can be categorised as containing elements of all three, but can also be categorised as having an overall progressive, regressive or stable structure. The tone of the narrative can, according to Crossley (2000), be either positive or negative, and a positive narrative tone can be seen in a story of a negative event told in a positive light, and a negative narrative tone can be found in stories of positive events that are told in a negative light.

The narrative content draws upon issues found in the narratives, such as themes (Crossley, 2000), power-relations (Crossley, 2000) and internal states (Bauer et al., 2003). To answer the research question, it was decided to focus on the analysis within

the themes on how people construct the emotion and construct themselves in relation to the emotion. Power-relations were analysed in relation to how controlling the emotion was, or who/what controls the emotion. The internal states were based upon Bauer et al.'s (2003) categories of emotion, cognition, perception and physiological references – e.g. I felt, I thought, I saw/heard/smelt, I was tired. Furthermore it was noted who was experiencing this, whether the reference was to oneself or another. As will be discussed below in part 5.5.1, as the analysis progressed, the initially planned narrative analysis was further developed through use of discourse analytic tools.

The narrative analysis of the context was based upon Murrey's (2003) categories of 'personal' – how the narrative draws on the experience of the individual; 'interpersonal and group' – take into consideration the audience and the co-construction of the narrative; and 'societal' – considers the broader social narratives which structure everyday accounts; 'group-belongings' – use of I, me as opposed to them, they. Already during the interviewing of the participants, it became clear to the researcher that the participants would orient themselves very much towards the interviewer in the form of looking for confirmation of whether what they were talking about was the 'right' things to be disclosing, and thus the role of the interviewer became an important part of the narrative analysis in the form of 'interaction in the interviews'. As the narrative analysis progressed, the analysis took more form from discourse analysis as described further below.

#### *4.5.5.1. Narrative Analysis & Discourse Analysis*

The analytic procedure evolved as the project went along. Although it had been the intention from the outset to draw on the analytic tools from discourse analysis when appropriate, it became especially clear that it was relevant to make more extensive use of discourse analysis than first anticipated in order to look at how people constructed themselves in relation to emotion. Issues such as focalization, stake and interest were of special relevance, as these are used in fact construction (Potter, 1996), as were the use of rhetorical contrasts and dualisms (Edwards, 1999). Focalisation was used to develop the analysis of the internal states described above. Potter (1996) describes three kinds of focalization: 'Internal focalization', which is when a narrator has access to one character's feelings and thoughts and other characters' feelings and thoughts are only accessible through inference. This construction may have the purpose of enabling the

listener to feel empathy with the narrator's situation, and so accept their presentation of events (Bal, 1985 in Potter, 1996). 'External focalization', in which the scenes of the event is described with no references to thoughts or feelings, and 'zero focalization' which is an omnipotent point of view where the narrator has access to the thoughts and feelings of all the actors. Edwards' (1999) identification of the rhetorical contrasts that people deploy when constructing emotion was used to in the analysis of power relations and how emotion, emotional and situational control was constructed.

#### 4.5.5.2. *A note on memory*

In open recall (when participants have a free choice of which memory to recall), often the memories are of the recent past, or from what is called 'the reminiscence bump' (Neisser & Libby, 2000:318), which is events that took place when the participant were between 10 and 25 years old. There are several suggestions as to why people chose to talk about events from this period of their lives: the 'maturational hypothesis' suggests that this is when the cognitive abilities are at their best, and thus we remember more from this time; the 'life narrative hypothesis' propose that this is an important time of our lives linked to our social identities and thus has a prominent place in our memory; and the 'cognitive hypothesis' advocates better encoding through the many changes that occur at that time of our lives (Neisser & Libby, 2000). Thus, if these memories were just based on cognitive resources, we would expect most memories from our participants to be from this period of their lives. If, however, memories are drawing on other functions, we would expect the memories to be drawn from a much wider age-range.

## 4.6. Summary of the pilot studies

### 4.6.1. Pilot study 1

Pilot study 1 consisted of several interview studies aimed at (1) training the researcher in the use of the cognitive interview, (2) using this technique to induce an emotion in the participant, (3) enabling the researcher to develop an interview structure that facilitated future studies where interviewing would be combined with measuring physiological responses to the induced emotions, and (4) enabling the researcher to familiarise herself with the structure of the procedure, issuing questionnaires and answering questions from the participants about the study.

### 4.6.2. Pilot study 2

Pilot study 2 was aimed especially at the IAPS, e.g. what pictures to use, how many pictures, the time they would be shown for, but also (1) continued training of researcher in the use of the cognitive interview and the overall procedure of the study, (2) use of the IAPS to induce negative emotion, and facilitate comparable ratings, and (3) training the researcher in measuring physiological responses (SCL) to the induced emotions.

The procedure (questionnaires and interview procedure) did not change from pilot study 1, apart from adding information about the IAPS and SCL to the information sheet. Viewing and rating of IAPS was added to the procedure and took place before the interview for half the participants, and after the interview for the other half. A series of pilot studies was carried out to ensure that the pictures to be used were appropriate for the study. The first set of pictures was taken from Cuthbert et al (2000). Some of these pictures were of a sexual nature, and many participants in the group viewing the pictures before the interview would talk of experiences of a sexual nature. The participants who viewed the pictures first did report being influenced by the pictures. Based on these findings and on other literature (Lang et al., 2001; Taylor et al., 2003) it was decided to have the interview first for all participants, and ensure that the pictures shown were of a non-sexual nature. Another pilot study was then based on the pictures from Taylor et al. (2003). This pilot study also tested different viewing procedures such as passive viewing and rating. Based on the pilot studies it was decided to make use of the rating of the pictures only. Timing for how long each picture was shown was based

on previous studies, and tests to ensure older participants' ability to rate the pictures in the time given were carried out with older participants (aged 60+).

## **4.7. Chapter conclusions**

This chapter described the methodology and data analysis for the study of emotion across the life span. It introduced the methodological considerations made prior to the study, and presented the procedure for the main parts of the study: questionnaire assessments of health and positive and negative affect, general questions to be asked during each of the main parts of the study, the interview asking the participant to talk of an emotionally significant event, and viewing and rating a series of emotionally valences pictures. It also described the physiological measures in the form of skin conductance level. Results and discussion of the quantitative data are presented in Chapters 5 and 6, while Chapters 7, 8 and 9 provides the narrative analysis.

# Chapter 5: Quantitative Results

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## 5.1. Chapter summary

This chapter presents the quantitative results. The first part of the chapter reports the results of the ratings of valence and arousal for the International Affective Picture System (IAPS). The second part deals with the skin conductance level (SCL) measures taken during the interview and during the viewing of the pictures. The third part presents the comparisons of SCL, Positive and Negative Affect Schedule (PANAS) and the subjective ratings, and the fourth part of the chapter reports on a comparison between the participants with the highest and lowest SCL scores.

## 5.2. IAPS Results

This part reports the subjective ratings of valence and arousal on the negative and neutral pictures. Pre-tests of the data showed normal distributions and no associations between gender and the subjective ratings (see also Chapter 4, part 4.5.4.).

### 5.2.1. Correlation between subjective ratings of valence and arousal of the negative pictures

It was of interest to investigate whether there was a relationship between the subjective ratings of valence and arousal on the negative pictures. A one-tailed Pearson's Correlation found a statistical significant positive relationship between subjective ratings of valence and arousal of the negative pictures ( $r=0.68$ ,  $df=49$ ,  $p<0.01$ ).

Statistically significant relationships between subjective ratings of valence and arousal were found in each age group and can be seen in Table 5.1 below:

**Table 5.1: Statistically significant relationships between subjective ratings of valence and arousal of negative pictures by age**

Age group	Pearson Correlation Coefficient $r$	Degrees of Freedom $df$	Significance (one-tailed) $p$
18-21 years old	0.63	20	<0.01
35-50 years old	0.67	12	<0.01
65+ years old	0.83	13	<0.01

Thus, increased ratings of valence (increased unpleasantness) were associated with increased arousal. (The scale goes from +5 very pleasant through 0 to -5 very unpleasant for valence, and from 0 to 5 for arousal).

### 5.2.2. Correlation between subjective ratings of valence and arousal of the neutral pictures

It was of interest to investigate whether there was a relationship between the subjective ratings of valence and arousal on the neutral pictures. A one-tailed Pearson's Correlation found a statistical significant positive relationship between subjective ratings of valence and arousal of the neutral pictures ( $r=0.57$ ,  $df=49$ ,  $p<0.01$ ).

Statistically significant relationships between subjective ratings of valence and arousal of neutral pictures were found in all age groups:

**Table 5.2: Statistically significant relationships between subjective ratings of valence and arousal of neutral pictures by age**

Age group	Pearson Correlation Coefficient $r$	Degrees of Freedom $df$	Significance (one-tailed) $p$
18-21 years old	0.37	20	=0.05
35-50 years old	0.59	12	<0.05
65+ years old	0.63	13	<0.01

Thus, for the neutral pictures increased ratings of valence were associated with increased ratings of arousal.

### 5.2.3. Mean ratings of the pictures compared between the groups

In order to investigate potential differences in how the pictures were rated overall with regards to valence and arousal, one-way ANOVAs were carried out for both negative and neutral pictures.

Figure 5.1 below shows the age groups' mean ratings of valence and arousal on the negative pictures.

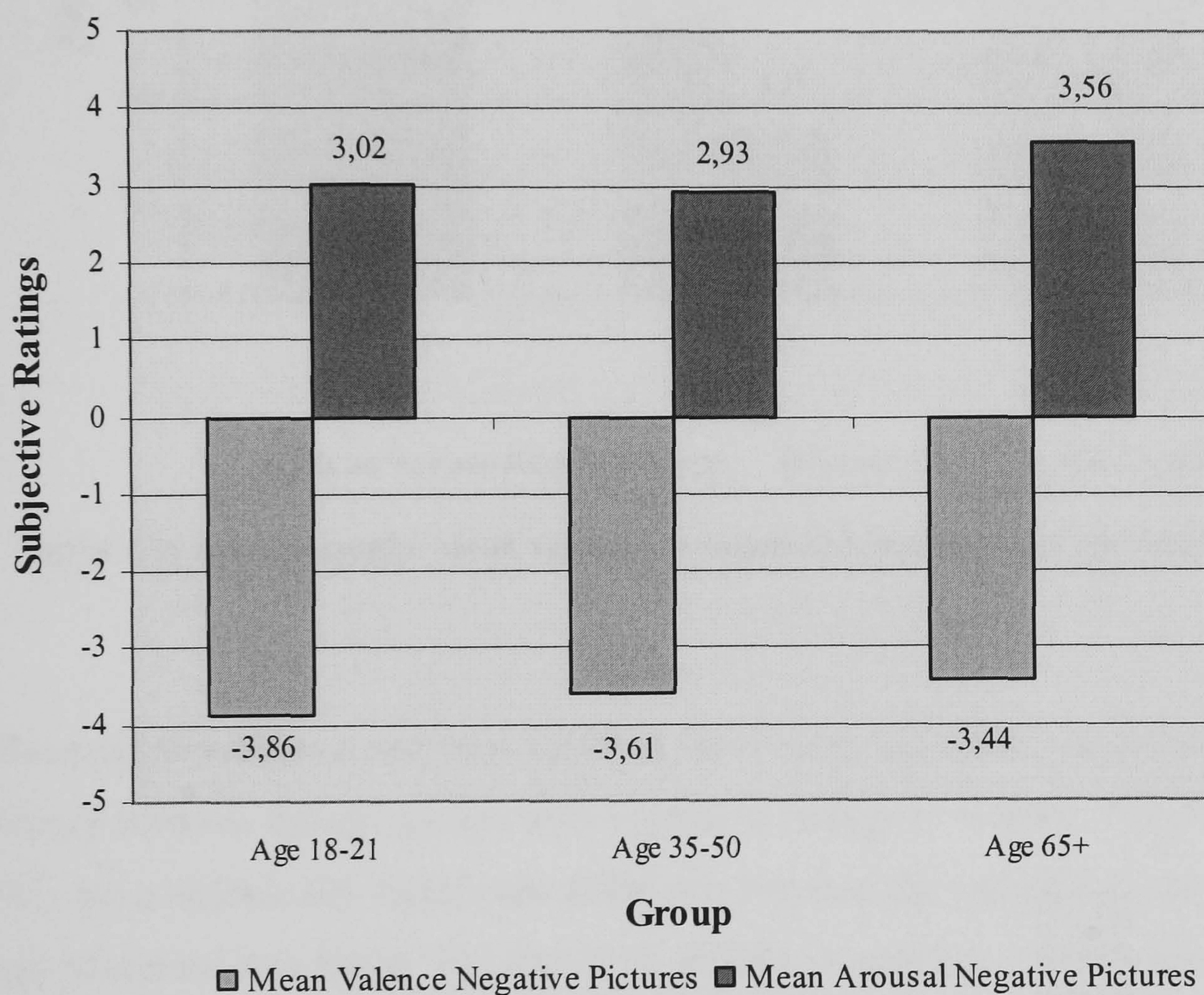
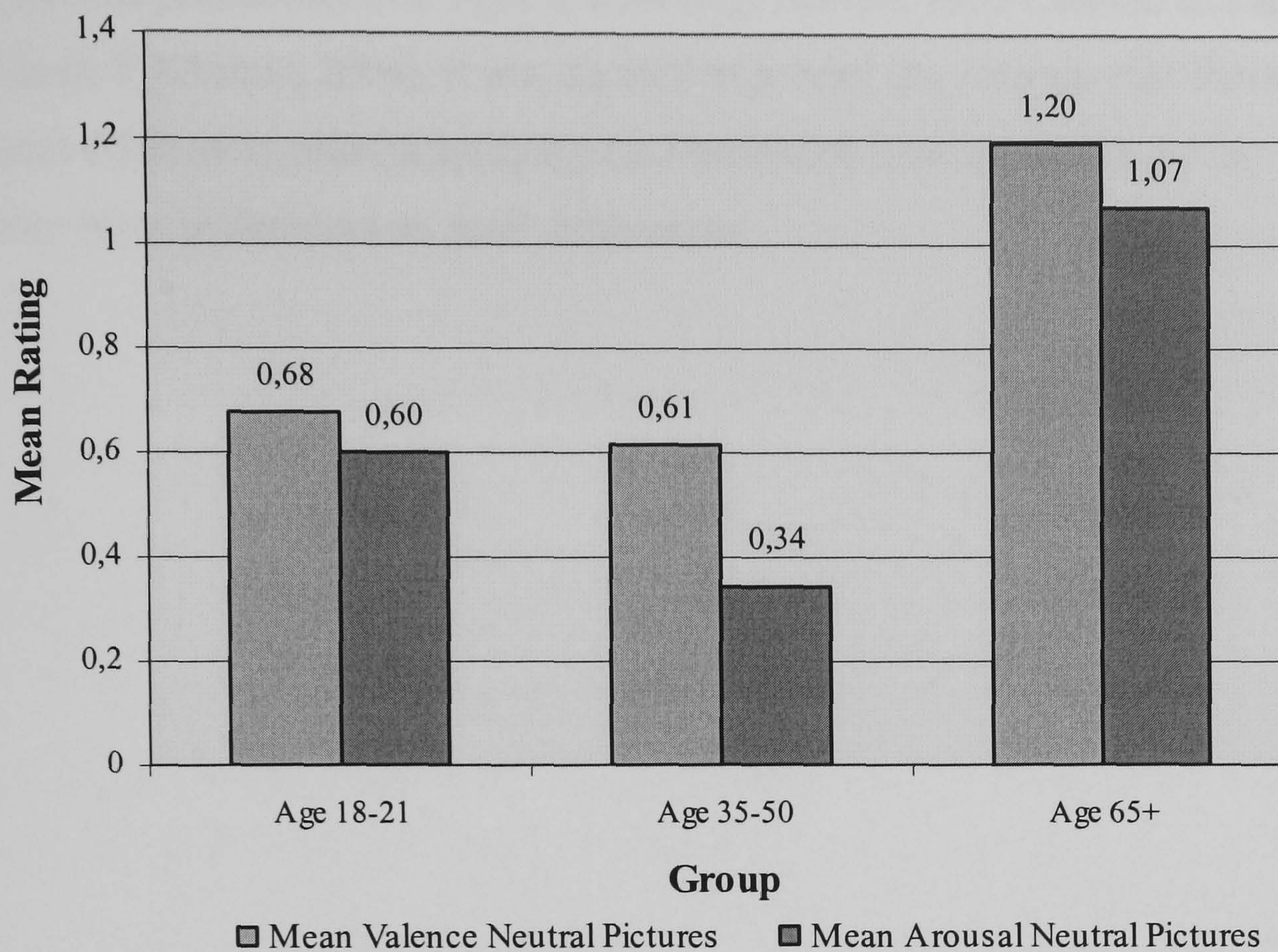


Figure 5.1: The age groups' mean ratings if of valence and arousal on the negative pictures

For the negative pictures a one-way ANOVA showed no statistical significant difference between the age groups: Valence  $F(2,29)=0.68$ ,  $p=0.51$ ; Arousal  $F(2,48)=1.86$ ,  $p=0.17$ .



Figure 5.2 below shows the group's mean ratings of valence and arousal on the neutral pictures.



**Figure 5.2: The age groups' mean ratings of valence and arousal on the neutral pictures**

For the neutral pictures a one-way ANOVA showed no statistically significant difference between the age groups with regards to ratings of valence:  $F(2,49)=2.80$ ,  $p=0.07$ , but a statistically significant difference between the groups with regards to the ratings of arousal was found:  $F(2,48)=5.76$ ,  $p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the difference in arousal ratings was found between groups 2 and 3 (age 35-50 and 65+ years old) with a mean difference of 0.73,  $SE=0.22$ ,  $p=0.01$ . The mean difference between age group 3 and age group 1 (65+ and 18-21 years old) of 0.47 ( $SE=0.19$ ) was not statistical significant ( $p=0.06$ ).

To investigate these findings further, one-way ANOVAs were carried out for each picture on both valence and arousal. The following presents the statistical significant results, including the results from the post hoc test conducted to identify which groups differed from each other. As it was a series of ANOVAs, Bonferroni Correction was applied to minimise the risk of a Type I error (finding significant differences that are not really there). The adjusted alpha level formula is  $\alpha/c$ , where  $c$  is the number of comparisons made. Thus, the null hypothesis would be rejected only if the test were

significant at the  $0.05/12$  level  $=0.0042$ . As there is some controversy about the application of Bonferroni Correction (as it minimises the probability of a Type I error, it increases the probability of a Type II error (e.g. Howell, 1995 Columb & Sagadai, 2006; Gordi & Khamis, 2004), it was decided to present the findings that showed significant differences prior to applying the Bonferroni Correction, but not to emphasise these differences as 'real' differences.

### 5.2.3.1. Statistically significant differences in ratings of valence of the negative pictures

#### Picture 7

The picture showed a close-up of a baby's face with a tumour completely hiding one eye.

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 7's valence:  $F(2,46)=3.83, p=0.05$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age groups 1 and 2 only (age 18-21 and 35-50 years old) with a mean difference of 0.95,  $SE=0.35, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.09 and 1.82.

No statistically significant differences were found between age group 3 (65+ years old) and age groups 1 and 2 respectively (18-21 and 35-50 years old).

Figure 5.3 shows the group's mean scores of picture 7 compared between the age groups.

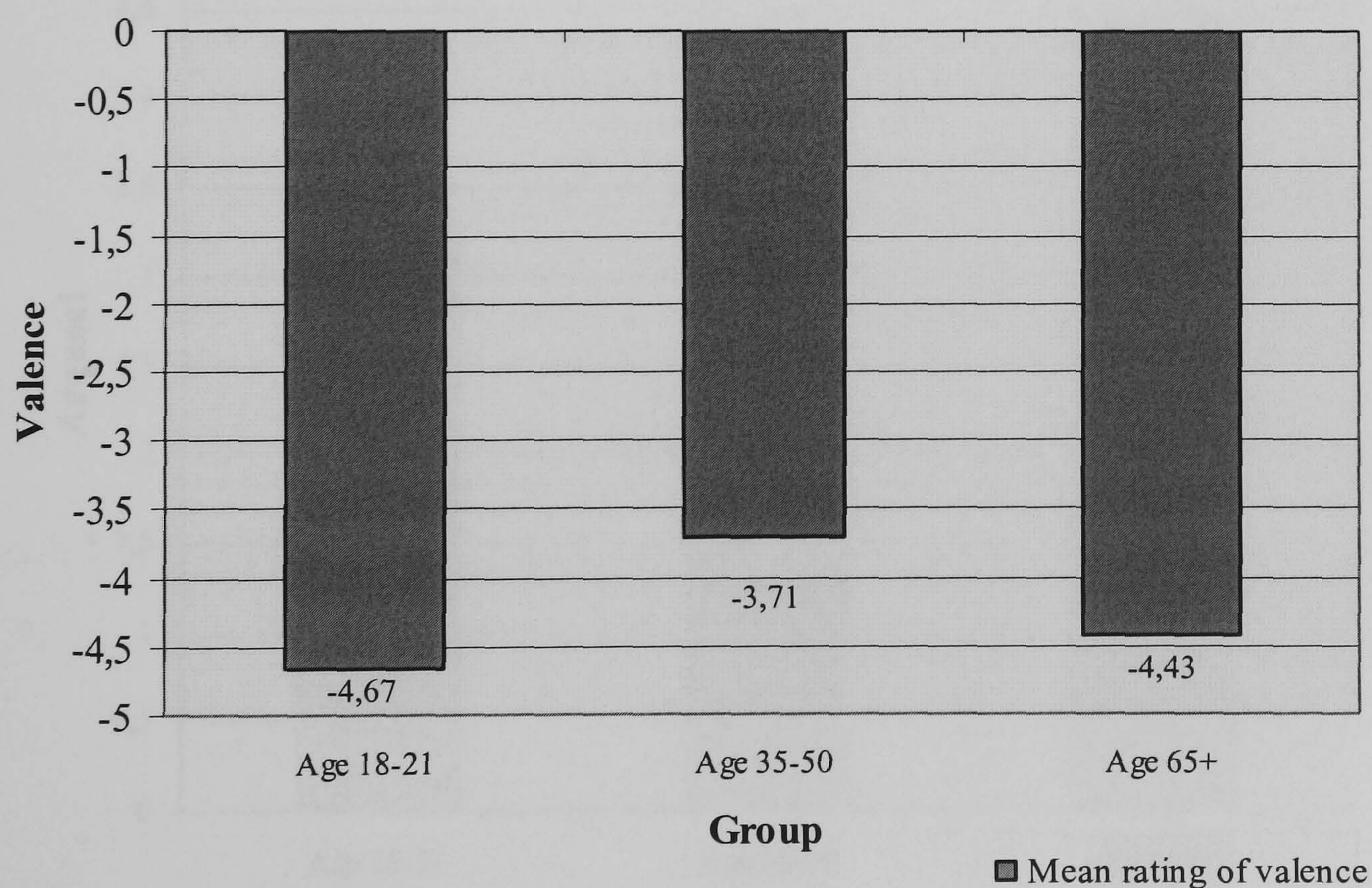


Figure 5.3: Comparison of the age groups' mean valence scores of picture 7

### 5.2.3.2. Statistically significant differences in ratings of arousal of the negative pictures

#### Picture 9

The picture showed a close-up of a mutilated face of what seems to be an adult.

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 9's arousal:  $F(2,46)=3.95, p=0.05$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age group 3 and age group 1 (65+ and 18-21 years old) with a mean difference of 1.14,  $SE=0.41, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.13 and 2.16.

No statistically significant differences were found between age group 2 (35-50 years old) and age groups 1 and 3 respectively (18-21 and 65+ years old).

Figure 5.4 below shows the group's mean scores of picture 9 compared between the age groups.

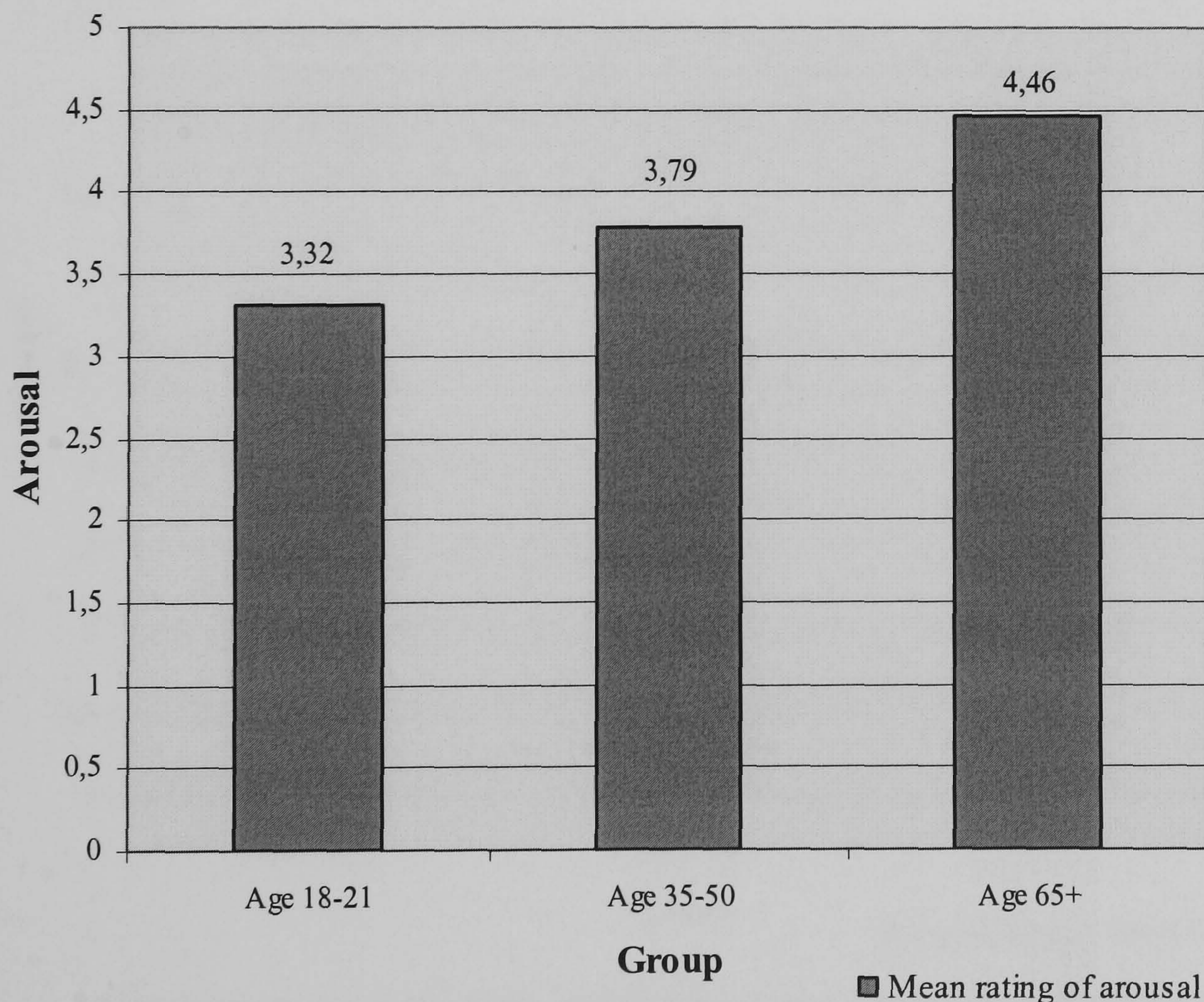


Figure 5.4: Comparison of the age groups' mean arousal scores of picture 9

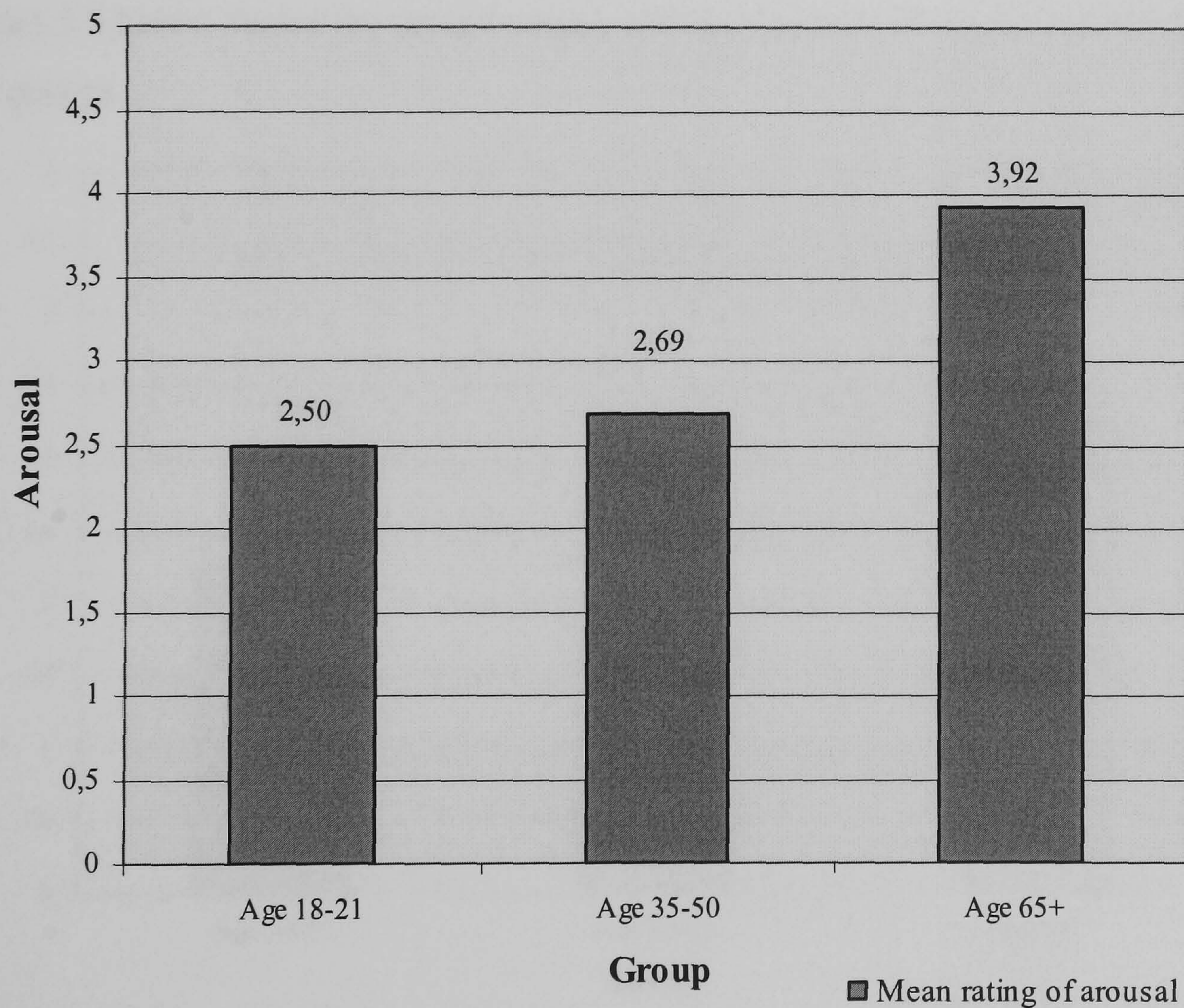
**Picture 21**

The picture showed a dead, starved dog.

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 21's arousal:  $F(2,45)=3.99, p=0.05$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age group 3 and age group 1 (65+ and 18-21 years old) with a mean difference of 1.14,  $SE=0.52, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.13 and 2.71.

No statistically significant differences were found between age group 2 (35-50 years old) and age groups 1 and 3 respectively (18-21 and 65+ years old).

Figure 5.5 below shows the group's mean scores of picture 21 compared between the age groups.



**Figure 5.5: Comparison of the age groups' mean arousal scores of picture 21**

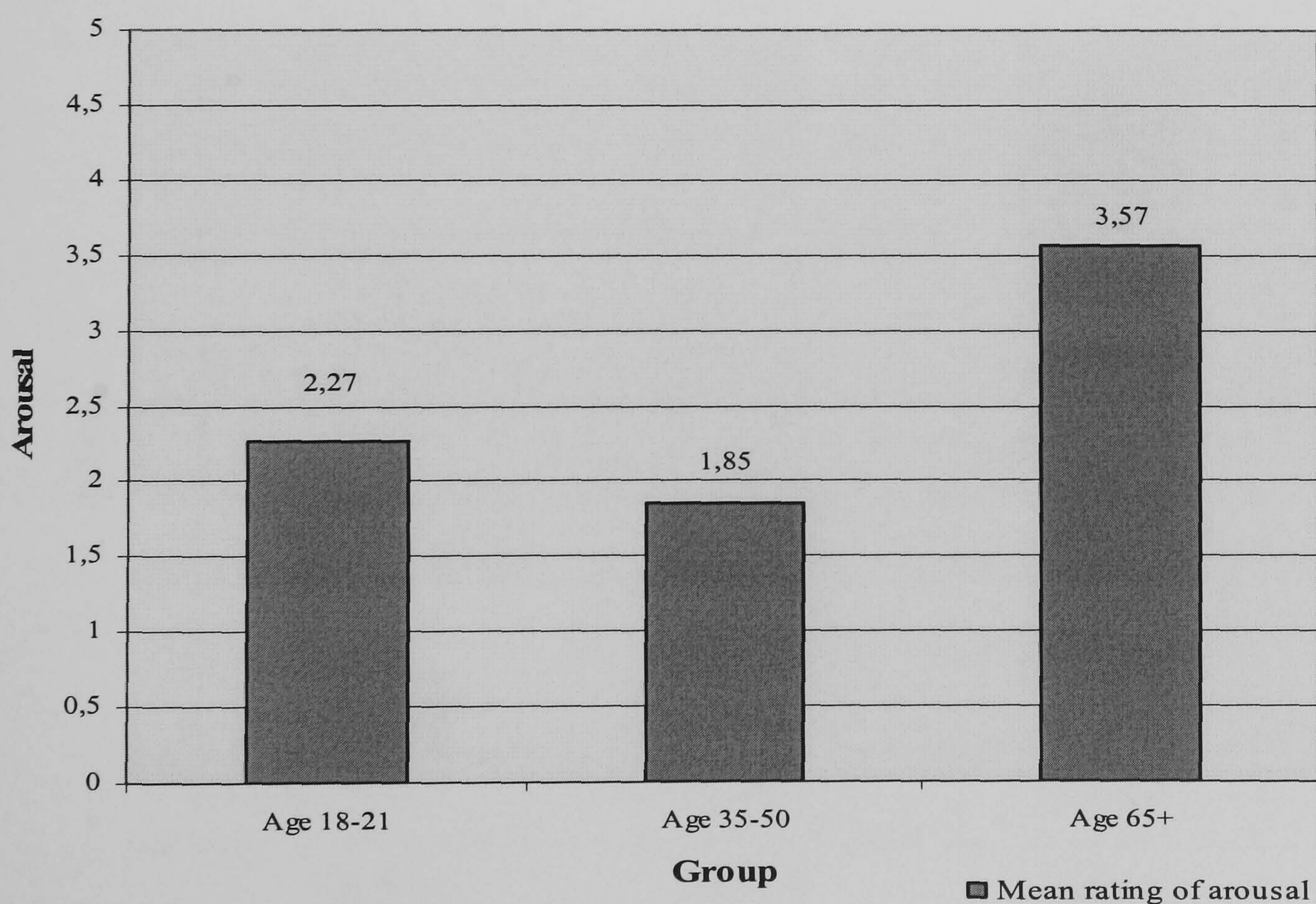
**Picture 28**

The picture showed a toilet filled with faeces.

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 28's arousal:  $F(2,46)=7.11, p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age group 3 (65+ years old) and age groups 1 and 2 respectively (18-21 and 35-50 years old). Age groups 65+ and 18-21 years old had a mean difference of 1.30,  $SE=0.43, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.23 and 2.37. Age groups 65+ and 35-50 years old had a mean difference of 1.73,  $SE=0.49, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.52 and 2.93.

No statistically significant differences were found between age groups 1 and 2 (18-21 and 35-50 years old).

Figure 5.6 below shows the group's mean scores of picture 28 compared between the age groups.



**Figure 5.6: Comparison of the age groups' mean arousal score for picture 28**

### 5.2.3.3. Statistically significant differences in ratings of valence of the neutral pictures

#### Picture 16

The picture showed a close-up of a single mushroom on grass

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 16's valence:  $F(2,47)=5.28, p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age groups 1 and 3 only (18-21 and 65+ years old) with a mean difference of 1.45,  $SE=0.45, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.34 and 2.56.

No statistically significant differences were found between age group 2 (35-50 years old) and age group 1 and 3 respectively (18-21 and 65+ years old).

Figure 5.7 below shows the group's mean scores of picture 16 compared between the age groups.

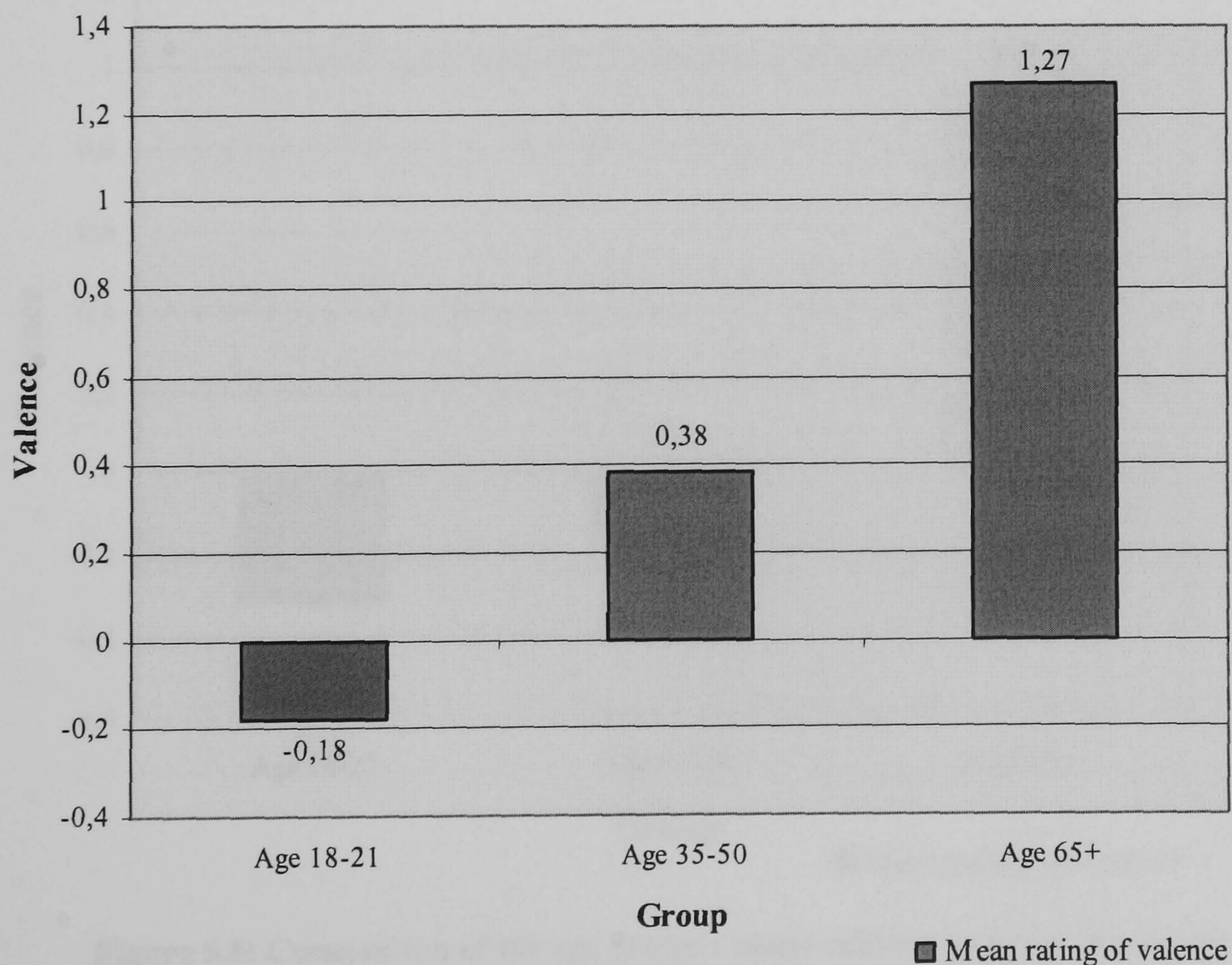


Figure 5.7: Comparison of the age groups' mean valence scores of picture 16

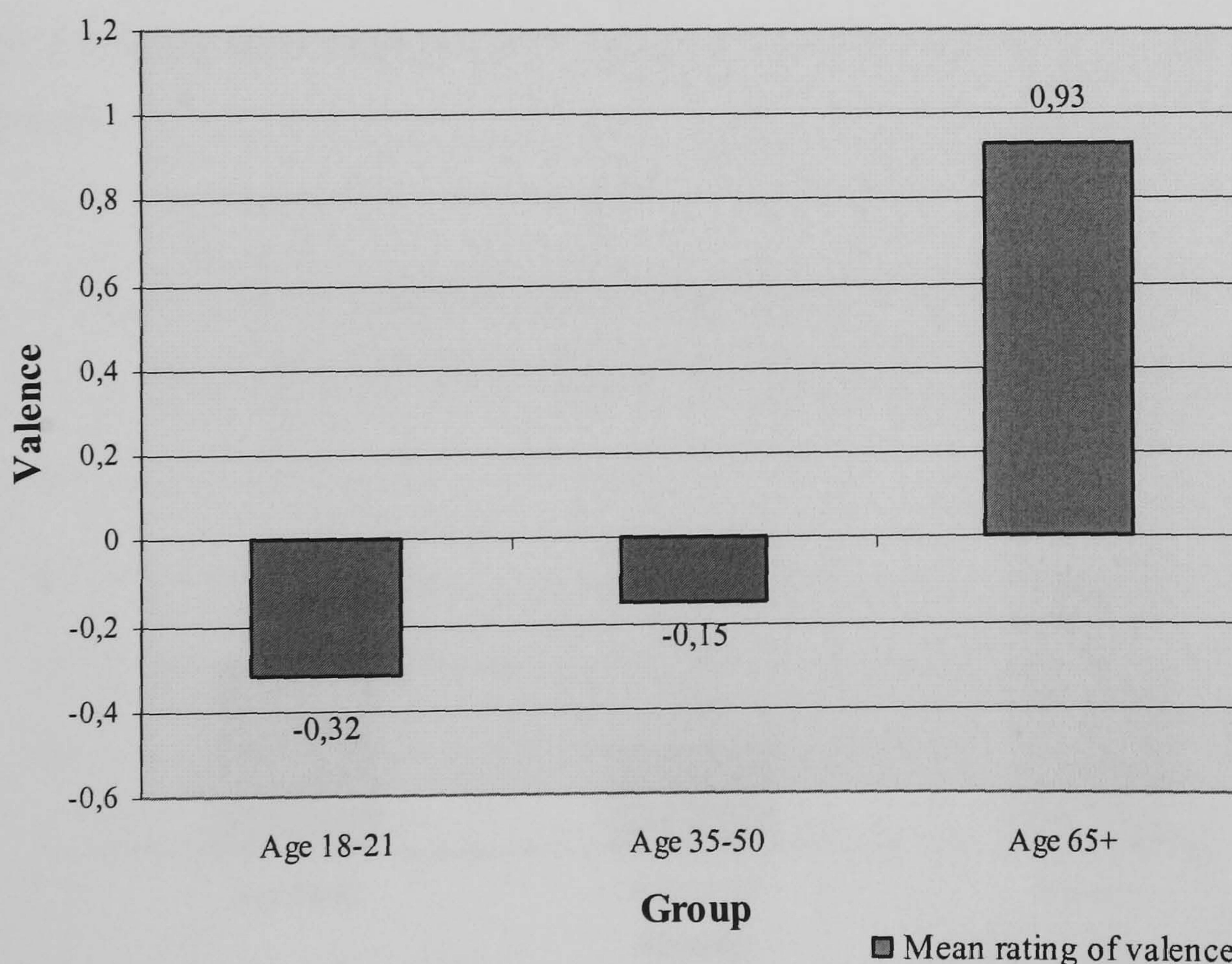
**Picture 20**

The picture showed a set of teenage male twins dressed in a red shirt and black jacket.

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 20's valence:  $F(2,47)=6.41, p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age group 3 (65+ years old) and age groups 1 and 2 respectively (18-21 and 35-50 years old). Age groups 65+ and 18-21 years old had a mean difference of 1.25,  $SE=0.36, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.33 and 2.15. Age groups 65+ and 35-50 years old had a mean difference of 1.09,  $SE=0.41, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.07 and 2.11.

No statistically significant differences were found between the age groups 1 and 2 (18-21 and 35-50 years old).

Figure 5.8 below shows the group's mean scores of picture 20 compared between the age groups.



**Figure 5.8:** Comparison of the age group's mean valence score for picture 20



#### 5.2.3.4. Statistically significant differences in ratings of arousal of the neutral pictures

##### Picture 16

The picture showed a close-up of a single mushroom on grass

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 16's arousal:  $F(2,47)=4.46, p=0.05$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age group 3 (65+ years old) and age groups 1 and 2 (18-21 and 35-50 years old) respectively. Age groups 65+ and 18-21 years old had a mean difference of 0.86,  $SE=0.34, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.01 and 1.7. Age groups 65+ and 35-50 years old had a mean difference of 1.04,  $SE=0.389, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.08 and 1.99.

No statistically significant differences were found between age groups 1 and 2 (18-21 and 35-50 years old)

Figure 5.9 below shows the group's mean scores of picture 16 compared between the age groups.

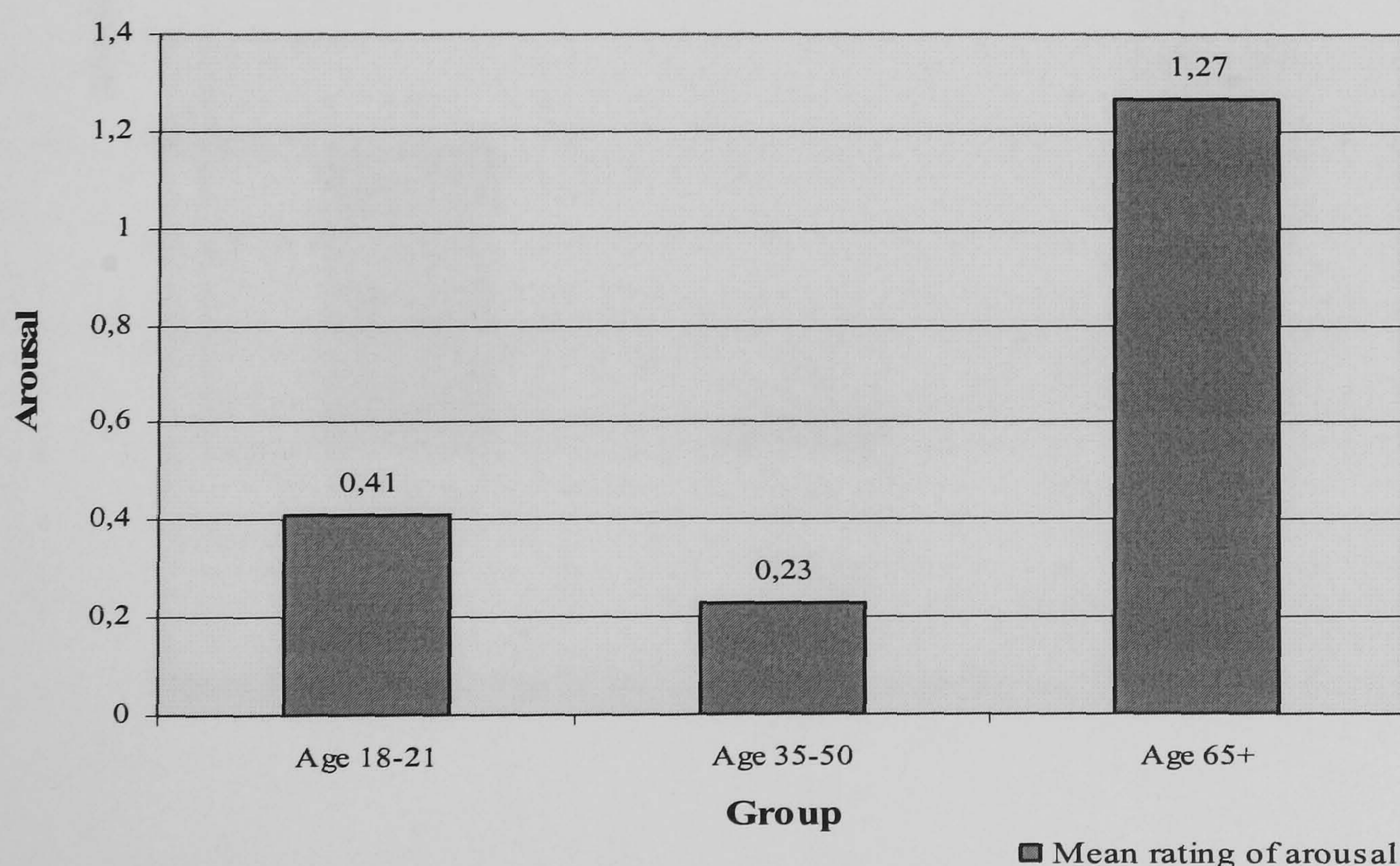


Figure 5.9: Comparison of the age groups' mean arousal scores of picture 16

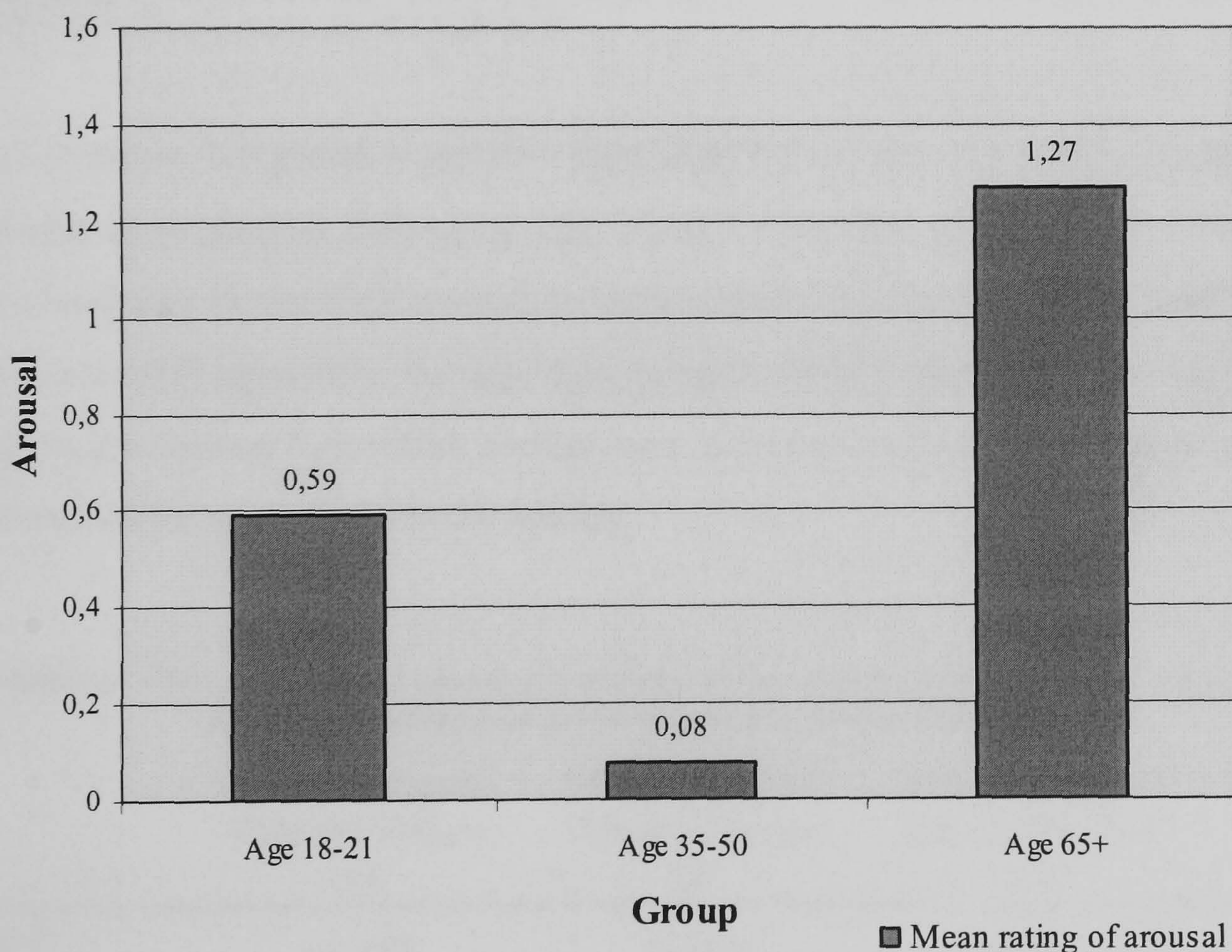
**Picture 26**

The picture showed multicoloured – blue, red and green - piece of clothing and beads

A one-way ANOVA showed that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the scoring of picture 26's arousal:  $F(2,47)=7.12, p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the differences were found between age groups 3 and 2 (65+ and 35-50 years old) with a mean difference of 1.19,  $SE=0.32, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.4 and 1.98.

No statistically significant differences were found between age group 1 (18-21 years old) and age groups 2 and 3 respectively (35-50 and 65+ years old).

Figure 5.10 below shows the group's mean scores of picture 26 compared between the age groups.



**Figure 5.10: Comparison of the age groups' mean arousal scores of picture 26**

It was of interest especially to compare the old age group (age 65+) with the younger groups to highlight any differences in how they rated the valence and arousal of the pictures. The findings reported above are presented in Table 5.3 and Table 5.4 in order to give an overview of the statistically significant differences between the old age group and the two younger groups with regards to the negative and neutral pictures respectively.

**Table 5.3: Mean ratings of valence and arousal of the negative pictures for the statistically significant differences between group 3 and groups 1 and 2**

	Mean rating of Valence Picture 7	Mean rating of Arousal Picture 9	Mean rating of Arousal Picture 21	Mean rating of Arousal Picture 28
Group 3 65+ years old	- 4.43 <sup>ns</sup>	4.46*	3.92*	3.57*
Group 1 18-21 years old	-4.67 <sup>ns</sup>	3.32*	2.50*	2.27*
Group 2 35-50 years old	-3.71 <sup>ns</sup>	3.79 <sup>ns</sup>	2.69 <sup>ns</sup>	1.85*

\* Significant at the .05 level, ns=not significant

Table 5.3 shows that group 3 (age 65+ years old) did not rate this picture as statistically significant more positive than age groups 1 and 2. The table also shows that age group 3 had a tendency to rate their arousal on some negative pictures as higher than group 1 (18-21 years old) especially, but also than group 2 (35-50 years old). However, if taking the Bonferroni Correction into account, none of these results would show significant differences between the groups.

**Table 5.4: Mean ratings of valence and arousal of the neutral pictures for the statistically significant differences between groups 3 and groups 1 and 2**

	Mean rating of Valence Picture 16	Mean rating of Valence Picture 20	Mean rating of Arousal Picture 16	Mean rating of Arousal Picture 26
Group 3 65+ years old	+1.27*	+0.93*	1.27*	1.27*
Group 1 18-21 years old	-0.18*	-0.32*	0.41*	0.59 <sup>ns</sup>
Group 2 35-50 years old	+0.38 <sup>ns</sup>	-0.15*	0.23*	0.08*

\* Significant at the .05 level, ns=not significant

Table 5.4 shows that there was a tendency for the old age group (65+ years old) to rate some neutral pictures (pictures 16 and 20) as more positive than their younger counterparts. The old age group also had a tendency to rate their arousal higher than the younger groups with regards to the neutral pictures (pictures 16 and 26). However, if taking the Bonferroni Correction into account, none of these results would show significant differences between the groups.

### 5.3. SCL Results

This part reports the measures of Skin Conductance Level (SCL) which was measured throughout the session (please see Chapter 4 part 4.4.5.1. for further information about the measure of SCL). Pre-tests of the data showed normal distributions (please see Chapter 4 part 4.5.4. for further information). Following the results from the interview and the picture series will be presented in turn. First an overview of preliminary tests of the data will be given.

Figure 5.11 below shows the groups' mean physiological responses in the baseline before the interview, during the interview and the differences between the two. Group 1 (age 18-21 years old) consists of 21 participants, Group 2 (age 35-50 years old) consists of 12 participants, and Group 3 (age 65+ years old) consists of 15 participants.

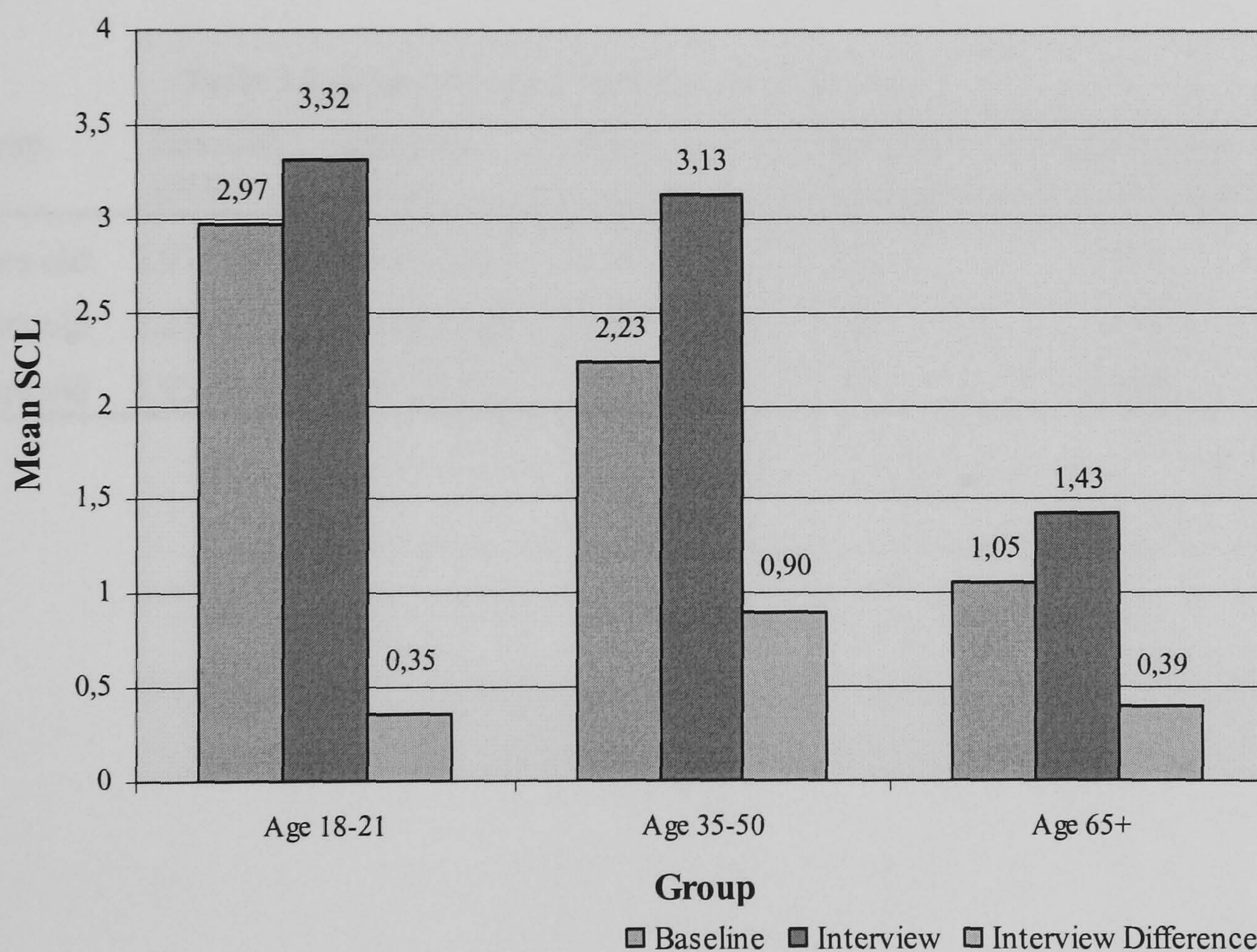


Figure 5.11: The age group's mean SCL during the interview

As previous findings have suggested that older people have attenuated SCL, a one-way ANOVA was carried out to investigate whether the old age group's initial baseline SCL was statistically significant lower than either of the younger groups' SCL. With regards to the baseline SCL before the interview, it was found that that any differences between

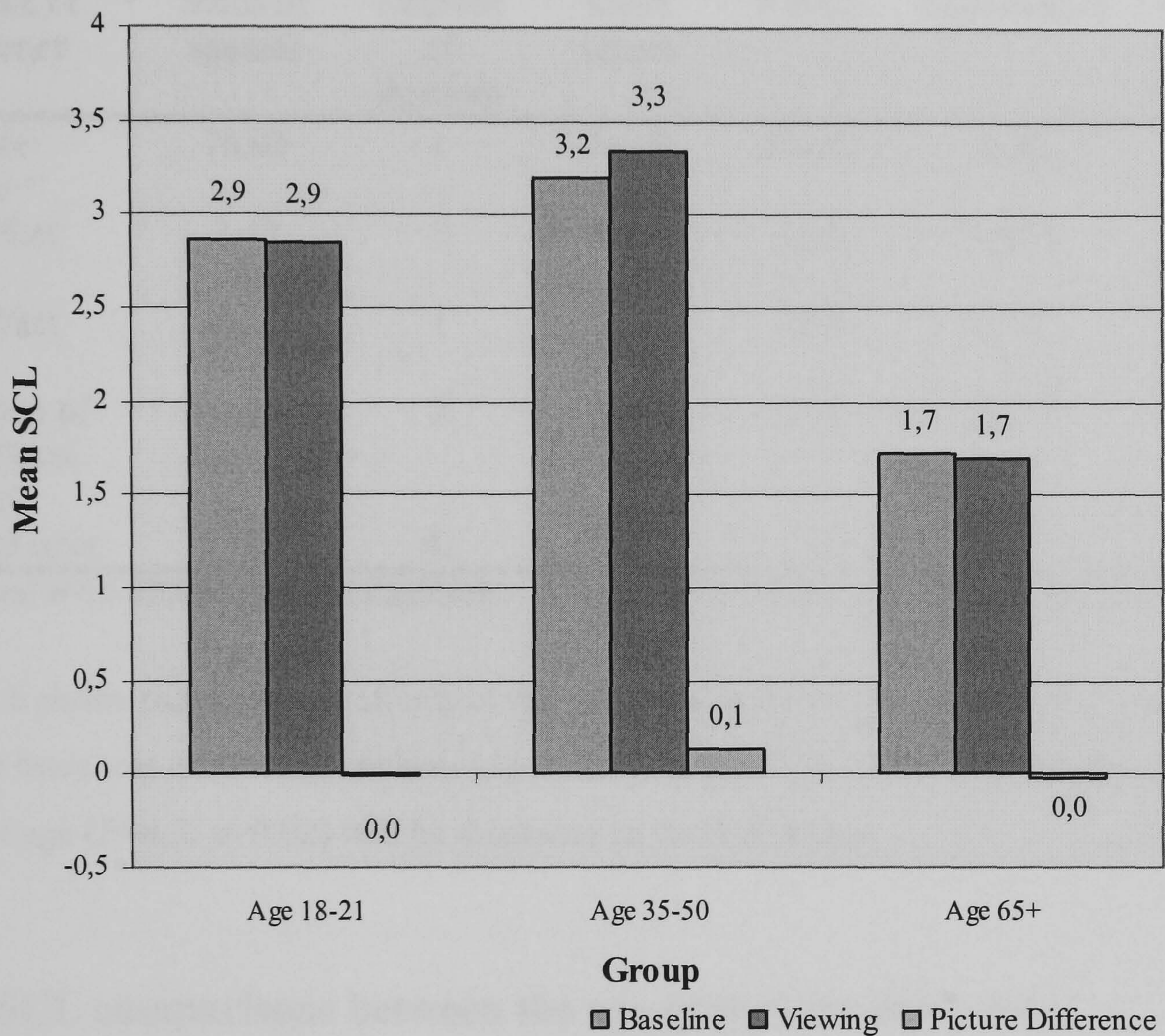
the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in the interview baseline:  $F(2,45)=9.07$ ,  $p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the statistically significant differences were found between age groups 3 and 1 (65+ and 18-21 years old) with a mean difference of 1.92,  $SE=0.45$ ,  $p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.83 and 3.01. No statistically significant difference was found between age groups 3 and 2 (65+ and 35-50 years old) (mean difference=1.18,  $SE=0.52$ ,  $p=0.07$ ), although it did show a similar trend.

Paired samples t-test were carried out for each group to investigate whether the changes in SCL from baseline to interview were statistically significant. For all groups there was a statistically significant increase in the SCL from baseline to interview, as can be seen in Table 5.5. Bonferroni was used to adjust for the multiple comparisons.

**Table 5.5: Mean SCL from baseline and interview**

Age group	Baseline ( <i>SD</i> )	Interview ( <i>SD</i> )	t-test <i>t</i>	Degrees of Freedom <i>df</i>	Significance (Two-tailed) <i>p</i>
18-21 years old	2.97 (1.76)	3.32 (1.94)	-3.08	20	0.05
35-50 years old	2.23 (1.17)	3.13 (1.34)	-4.65	11	0.05
65+ years old	1.05 (0.44)	1.43 (0.73)	-4.35	14	0.05

It was also of interest to investigate the SCL measures taken during the picture series. Figure 5.12 below shows the groups' mean physiological responses in the baseline, to the pictures, and the differences between the two. Group 1 (18-21 years old) consists of 7 participants, Group 2 (35-50 years old) consists of 13 participants, and Group 3 (65+ years old) consists of 15 participants.



**Figure 5.12: The age group's mean SCL to the picture series**

Paired samples t-test were carried out for each group to investigate whether the changes in SCL from baseline to pictures were statistically significant. There were no statistically significant differences between the baseline and picture for any of the groups.

Although this study was not looking at gender differences, and gender had been controlled for in the groups, a test was run to ensure that the potential differences found was not due to gender. Table 5.6 below is an example of the SCL data from the interview run in an ANCOVA with groups and gender as potential main effects.

**Table 5.6: Potential main effects from age and gender in interview SCL**

Source of variance	Sums of squares	Degrees of freedom	Mean square	F-ratio	Significance	Partial Eta
Covariate Baseline	78.93	1	78,93	279,67	0,00	0,87
Main effect Age	2,43	2	1,21	4,30	0.02*	0,17
Main effect Sex	0,03	1	0,03	0,10	0,75 <sup>ns</sup>	0,00
Interaction of Main effects (sex-age)	0,15	2	0,07	0,26	0,78 <sup>ns</sup>	0,01
Residual error	11,57	41	0,28			

\*Significant at the .05 level. ns = not significant

Table 5.6 shows that the main effects in the interview were between groups not gender, and that there was no interaction between sex and gender. The statistically significant effect of age ( $F=4.3$ ,  $p=0.02$ ) will be discussed in the following.

### 5.3.1. SCL comparisons between the age groups for interview measures

It was of particular interest to investigate whether there are differences between the groups in the increase in SCL when in an explicit emotional situation, such as the interview. A linear relationship was found between baseline and interview, and there were statistical significant differences between the groups regarding the baseline of SCL. The following analyses were carried out using ANCOVA with baseline as the covariate to ensure that potential differences found in the increase from baseline to interview was not due to effects from the baseline (see also Chapter 4, part 4.5.4.). After finding differences between the groups, post hoc test of pairwise comparisons (Bonferroni) were used to assess which groups differed from each other.



**Table 5.7: Real mean and estimated mean in interview SCL**

	Real Mean	Standard Deviation	Estimated Mean	Standard Error	Grand Mean	Standard Error
18-21 years old	3.31	1.94	2.48	0.12		
35-50 years old	3.13	1.34	3.08	0.15		
65 + years old	1.43	0.73	2.65	0.15		
					2.74	0.77

Table 5.7 shows the real mean compared to the estimated means used in the analysis. Baseline was valued at 2.18

The ANCOVA showed that with regards to the interview SCL it was found that that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between the age groups in increase from baseline to interview:  $F(2,44) = 5.16, p = 0.01, \eta^2 = 0.19$ . A post hoc test of pairwise comparisons (Bonferroni) showed that the statistical significant differences were found between age groups 2 and 1 (35-50 and 18-21 years old) with a mean difference of 0.603,  $SE = 0.19, p = 0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.13 and 1.08. Although not reaching statistical significance at the .05 level, the mean difference between age groups 2 and 3 (35-50 and 65+ years old) was 0.44,  $SE = 0.21, p = 0.09$ . The confidence interval showed that the population mean difference is likely (95%) to be found between -0.09 and 0.97.

### 5.3.2. SCL comparisons between the age groups for picture measures

It was of interest to investigate whether there are differences between the groups in the increase in SCL when exposed to emotional stimuli such as the pictures. A one-way ANOVA found statistically significant differences between the groups regarding the baseline of SCL:  $F(2,32)=4.29, p=0.05$ , and regarding the pictures:  $F(2,32)=4.51, p=0.05$ . The following analyses were carried out using ANCOVA with baseline as the covariate, assuming a pre-test/post test condition. After finding differences between the groups, post hoc test of pairwise comparisons (Bonferroni) were used to assess which groups differed from each other. The findings are presented below.

**Table 5.8: The age groups' real mean SCL and estimated mean SCL from viewing the pictures**

	Real Mean SCL	Standard Deviation	Estimated Mean SCL	Standard Error	Grand Mean	Standard Error
18-21 years old	2.85	1.42	2.48	0.13		
35-50 years old	3.33	1.87	2.61	0.10		
65 + years old	1.70	1.61	2.50	0.09		
					2.53	0.06

Table 5.8 shows each groups' real mean SCL compared to the estimated mean SCL used in the analysis. Baseline was valued at 2.50

The ANCOVA showed that with regards to the picture SCL it was found that that any differences between the groups were likely to have arisen by sampling error, thereby assuming no differences in the sample population and finding no statistically significant differences between the age groups in the SCL increase from baseline to pictures:

$$F(2,29)=2.66, p=0.09, \eta^2=0.16.$$

## 5.4. Comparisons between SCL, PANAS and Subjective Ratings

It was of interest to investigate other potential relationships between the data in order to compare differences and similarities between the age groups. Preliminary tests showed normal distribution of the data and no gender associations (please see Chapter 4 part 4.5.4.).

### 5.4.1. How long ago did the event happen

It was of interest to investigate potential differences between the groups in how long ago the event they talked about in the interview happened. Due to age alone it was predicted that a difference would be found. Figure 5.13 below shows the mean scores from how long ago the event took place, compared between the age groups.

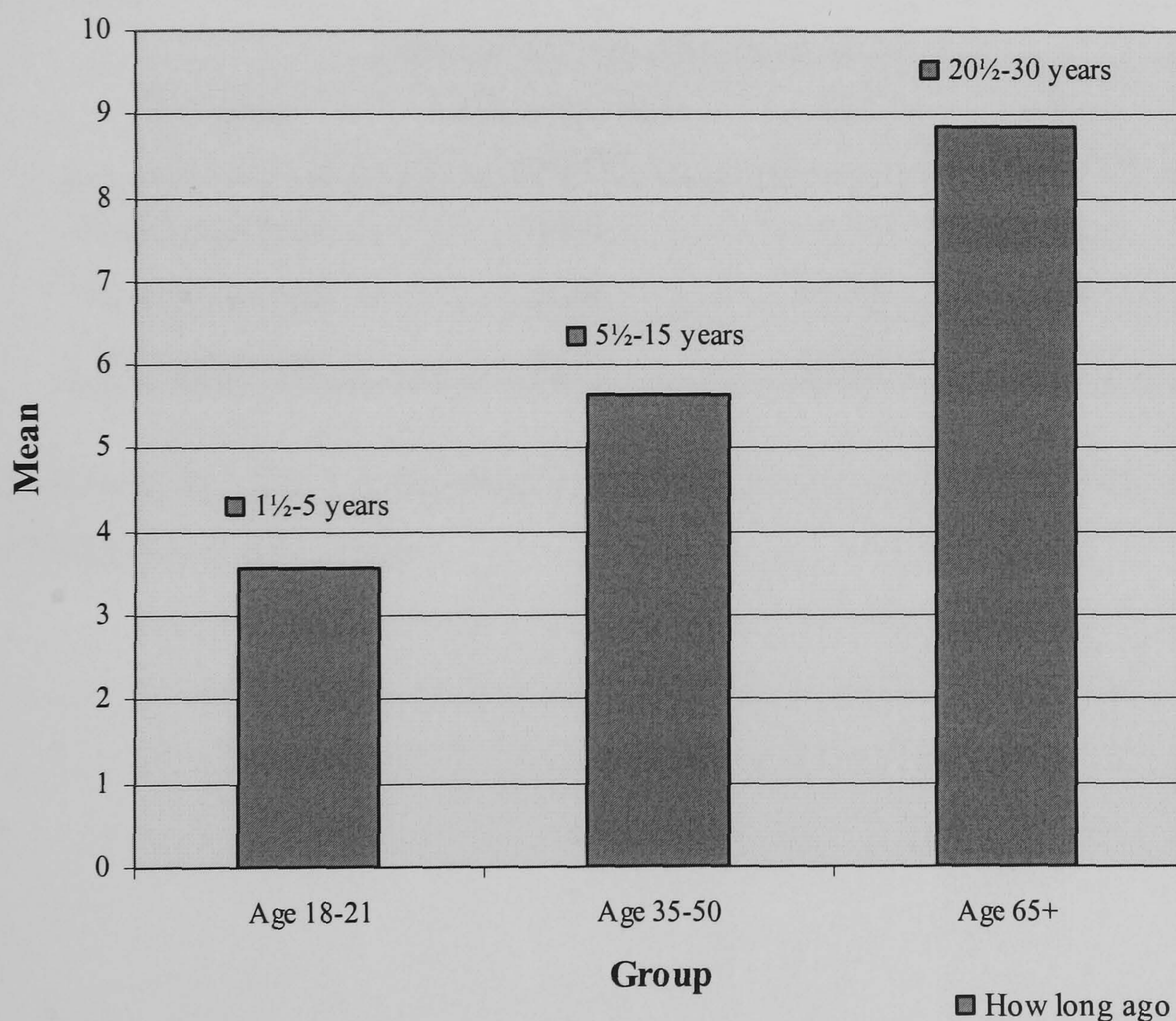


Figure 5.13: Mean scores of how long ago the event took place

A one-way ANOVA found that that any differences between the groups were unlikely to have arisen by sampling error, finding statistically significant differences between

the age groups:  $F(2,45) = 14.51, p=0.01$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the statistically significant differences were found between age groups 3 and 1 (65+ and 18-21 years old) with a mean difference of 5.39,  $SE=1.00, p=0.01$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 2.97 and 7.82. Statistically significant differences were also found between age groups 3 and 2 (65+ and 35-50 years old) with a mean difference of 3.01,  $SE=1.08, p=0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.40 and 5.62. Not reaching statistical significance, the mean difference between age groups 1 and 2 (18-21 and 35-50 years old) was found to be 2.38,  $SE=1.02, p=0.06$ .

The findings show that despite the predicted age differences all age groups talked about recent events as well as events that had happened a long time ago (relative to their age).

Table 5.9 shows how old the participants were when the event happened.

**Table 5.9: Age of participant at event**

Age group	Mean age then (years)	SD	Range (years)
18-21 years old	14.7	4.17	5-20
35-50 years old	25.9	11.59	4-39
65+ years old	41.8	20.51	14-72

As can be seen in Table 5.9, the range of the participants' ages varied within the groups as well as between the groups.

### 5.4.2. PANAS

The Positive and Negative Affect Schedule (PANAS) was issued to investigate whether the groups differed on their ratings of their general positive and negative affect. Figure 5.14 below shows how the age groups differed in their scores on PANAS as well as the norm score from the PANAS manual.

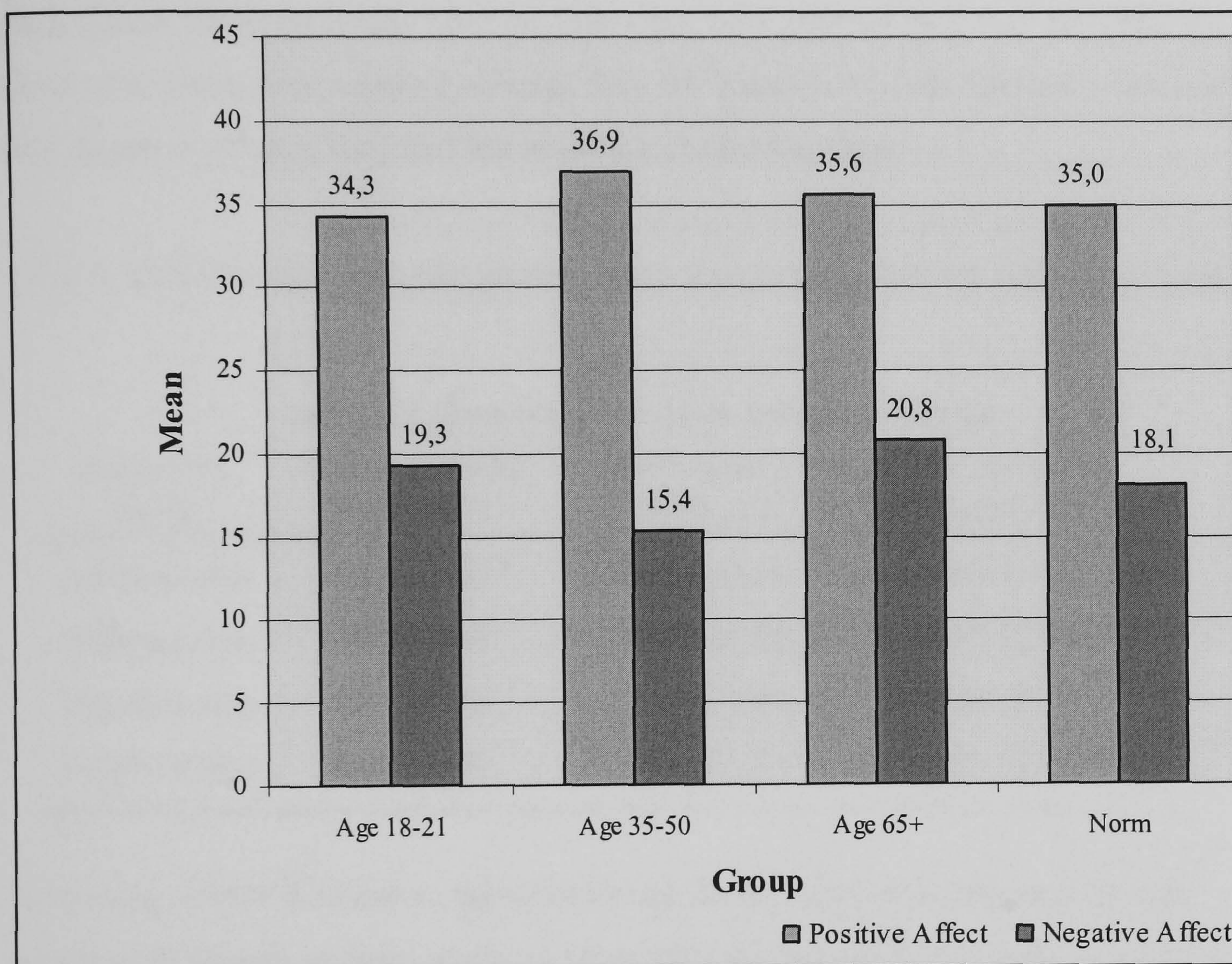


Figure 5.14: The age groups' scores on PANAS

With regards to the scores on PANAS a one-way ANOVA showed no statistically significant differences between the groups, and no statistical differences between the norm score and the groups. There was found no gender associations.

### 5.4.3. Subjective ratings

One-way ANOVAs showed no statistically significant differences between the groups' scores on PANAS and the subjective ratings.

It was of interest to investigate whether there were any differences in how the groups rated their subjective feelings. The subjective ratings were: how affected the participants felt immediately after the interview, how affected they had felt when the event took place, how negative affected they felt immediately after the interview and how negative affected they had felt when the event took place.

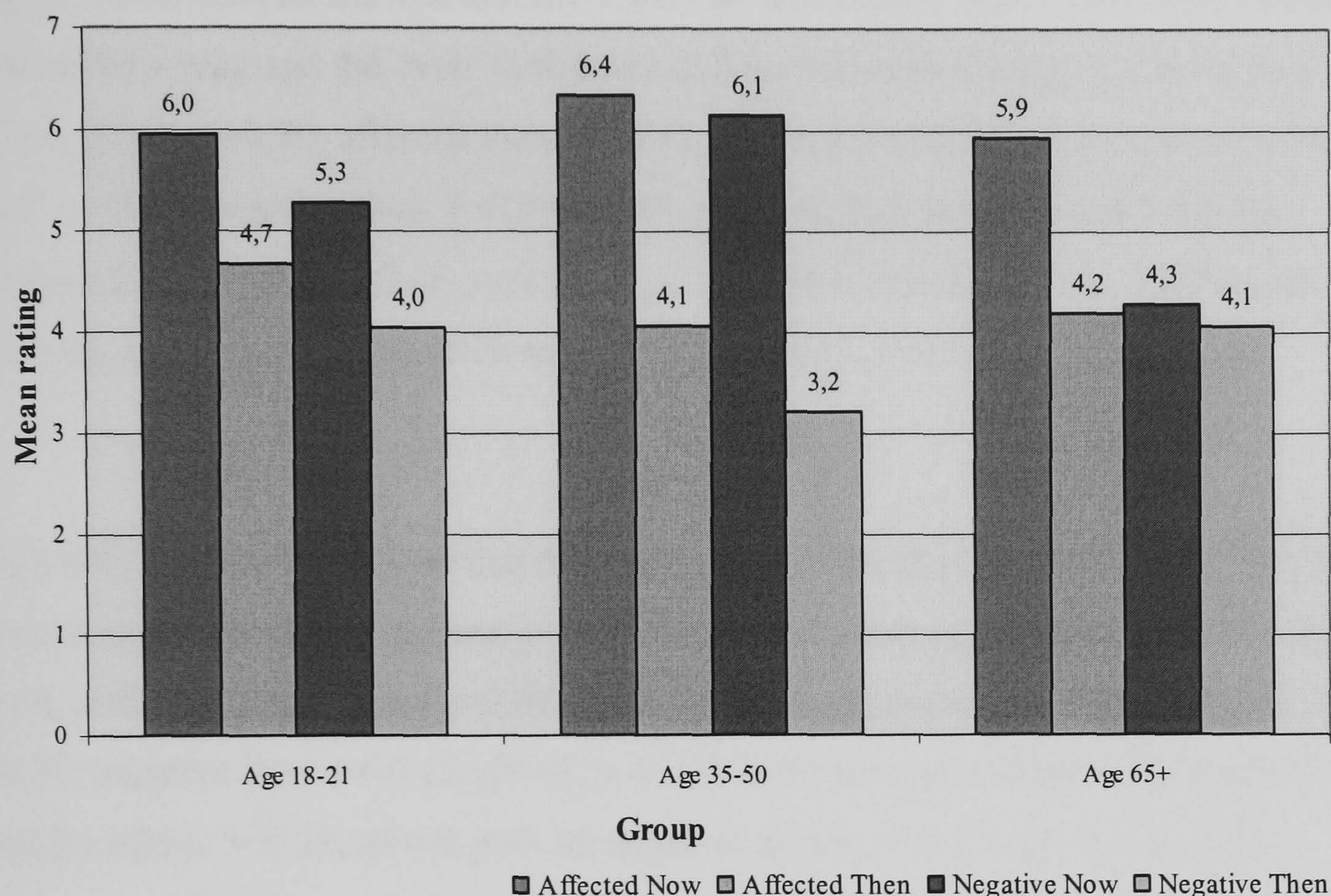
Table 5.10 below shows the age groups' mean scores on each of the subjective ratings.

**Table 5.10: Mean subjective ratings between the groups**

Subjective rating	18-21 years old Mean (SD)	35-50 years old Mean (SD)	65+ years old Mean (SD)
Affected now	5.95 (1.43)	6.36 (0.84)	5.94 (1.81)
Affected then	4.68 (1.49)	4.07 (1.69)	4.20 (2.21)
Negative now	5.27 (1.39)	6.14 (0.95)	4.29 (2.73)
Negative then	4.05 (1.99)	3.21 (1.42)	4.07 (2.34)

A one-way ANOVA found no statistically significant differences between the age groups with regards to their ratings of being affected now ( $F(2, 51) = 0.42, p = 0.66$ ), being affected then ( $F(2, 50) = 0.60, p = 0.55$ ) and being negative then ( $F(2, 49) = 0.93, p = 0.40$ ). A statistically significant difference between the groups was however found in the ratings of feeling negative now, a difference that was unlikely to have arisen by sampling error, finding statistically significant differences between the age groups:  $F(2, 47) = 3.82, p = 0.05$ . A post hoc test of multiple comparisons (Tukey HSD) showed that the statistically significant differences were found between age groups 2 and 3 (35-50 and 65+ years old) with a mean difference of 1.86,  $SE = 0.67, p = 0.05$ . The confidence interval showed that the population mean difference is likely (95%) to be found between 0.23 and 3.49. The 35-50 year old age group rated themselves statistically significant more negative than the 65+ age group. No statistically significant differences were found between the young age group and the two older age groups.

Pearsons correlations were carried out to investigate any relationships between the subjective ratings. Figure 5.15 shows the subjective ratings compared between the groups.



**Figure 5.15: The Subjective Ratings**

Figure 5.15 shows the tendency for a relation between reporting feeling affected and feeling negative, both now and then. There was a statistically significant relationship between affected now and negative now ( $r=0.42$ ,  $df=48$ ,  $p<0.01$ ). Those who rated themselves as feeling less affected now, also rated themselves as feeling less negative now, and those who rated themselves as feeling very affected now also rated themselves as feeling very negative now.

There was a statistically significant relationship between affected then and negative then ( $r=0.51$ ,  $df=48$ ,  $p<0.01$ ). Those who rated themselves as feeling less affected then, also rated themselves as feeling less negative then, and those who rated themselves as feeling very affected then also rated themselves as feeling very negative then.

There was a statistically significant relationship between negative now and negative then ( $r=0.31$ ,  $df=48$ ,  $p<0.05$ ). Those who rated themselves as feeling less negative now,

also rated themselves as feeling less negative then, and those who rated themselves as feeling very negative now also rated themselves as feeling very negative then.

#### 5.4.4. Other relationships between the data

Pearson's correlations showed that there were no statistically significant relationships between how long ago the event took place and the subjective ratings (affected now:  $r=0.04$ ,  $df=48$ ,  $p=0.80$ ; affected then:  $r=-0.13$ ,  $df=48$ ,  $p=0.40$ ; negative now:  $r=-0.08$ ,  $df=47$ ,  $p=0.60$ ; negative then:  $r=0.09$ ,  $df=47$ ,  $p=0.54$ ); how long ago and PANAS (positive affect:  $r=0.15$ ,  $df=48$ ,  $p=0.30$ ; negative affect:  $r=0.01$ ,  $df=48$ ,  $p=0.99$ ) and how long ago and interview-difference ( $r=-0.07$ ,  $df=45$ ,  $p=0.64$ ).

Pearson's correlations showed that there were no statistically significant relationships between interview-difference and any of the subjective ratings (affected now:  $r=0.07$ ,  $df=48$ ,  $p=0.62$ ; affected then:  $r=0.07$ ,  $df=47$ ,  $p=0.64$ ; negative now:  $r=0.04$ ,  $df=46$ ,  $p=0.77$ ; negative then:  $r=-0.11$ ,  $df=46$ ,  $p=0.45$ ), and interview difference and PANAS (positive affect:  $r=0.24$ ,  $df=48$ ,  $p=0.10$ ; negative affect:  $r=-0.25$ ,  $df=48$ ,  $p=0.08$ ).



## 5.5. Comparisons between highest and lowest interview-difference SCL scores

In order to compare potential differences between participants with a high increase from baseline to interview with participants with a low increase from baseline to interview, an interview difference score was calculated by subtracting SCL baseline from SCL during interview (as suggested in Levenson, Carstensen & Gottman, 1994). 10 participants with the highest and lowest interview difference SCL scores respectively were selected and analysed separately from the rest of the participants in order to investigate potential relations between high or low SCL score and the rest of the data. The breakdown of who are in these two groups is shown in Table 5.11. below:

**Table 5.11: Comparison between the highest and lowest increase in SCL from baseline to interview**

High SCL				Low SCL			
Group	Gender	SCL	Theme	Group	Gender	SCL	Theme
2	Female	1.91	Loss	1	Male	-0.55	Other
1	Female	1.82	Positive	1	Male	-0.30	Loss
2	Female	1.70	Loss	1	Female	-0.14	Loss
2	Male	1.53	Loss	1	Female	-0.01	Loss
2	Male	1.36	Loss	1	Female	0.00	Other
2	Female	1.36	Trauma	3	Female	0.01	Trauma
1	Male	1.31	Trauma	3	Male	0.04	Loss
3	Male	1.27	Positive	2	Female	0.06	Positive
2	Female	1.19	Trauma	2	Female	0.07	Trauma
3	Female	0.90	Loss	3	Female	0.09	Loss

**Group:**

1:18-21 years old, mean SCL increase 0.35 (SD=0.52)

2:35-50 years old, mean SCL increase 0.90 (SD=0.67)

3:65+ years old, mean SCL increase 0.39 (SD=0.35)

As can be seen from Table 5.11, all age groups are represented in the high and low scores (age group 1=7, age group 2=8, age group 3=5), as well as all themes (Loss:10, Trauma: 5, Other:2, Positive story first:3). No statistically significant relationship between high and low SCL scores and gender was found.

Figure 5.16 shows the high SCL and low SCL groups' scores on Positive Affect and Negative Affect.

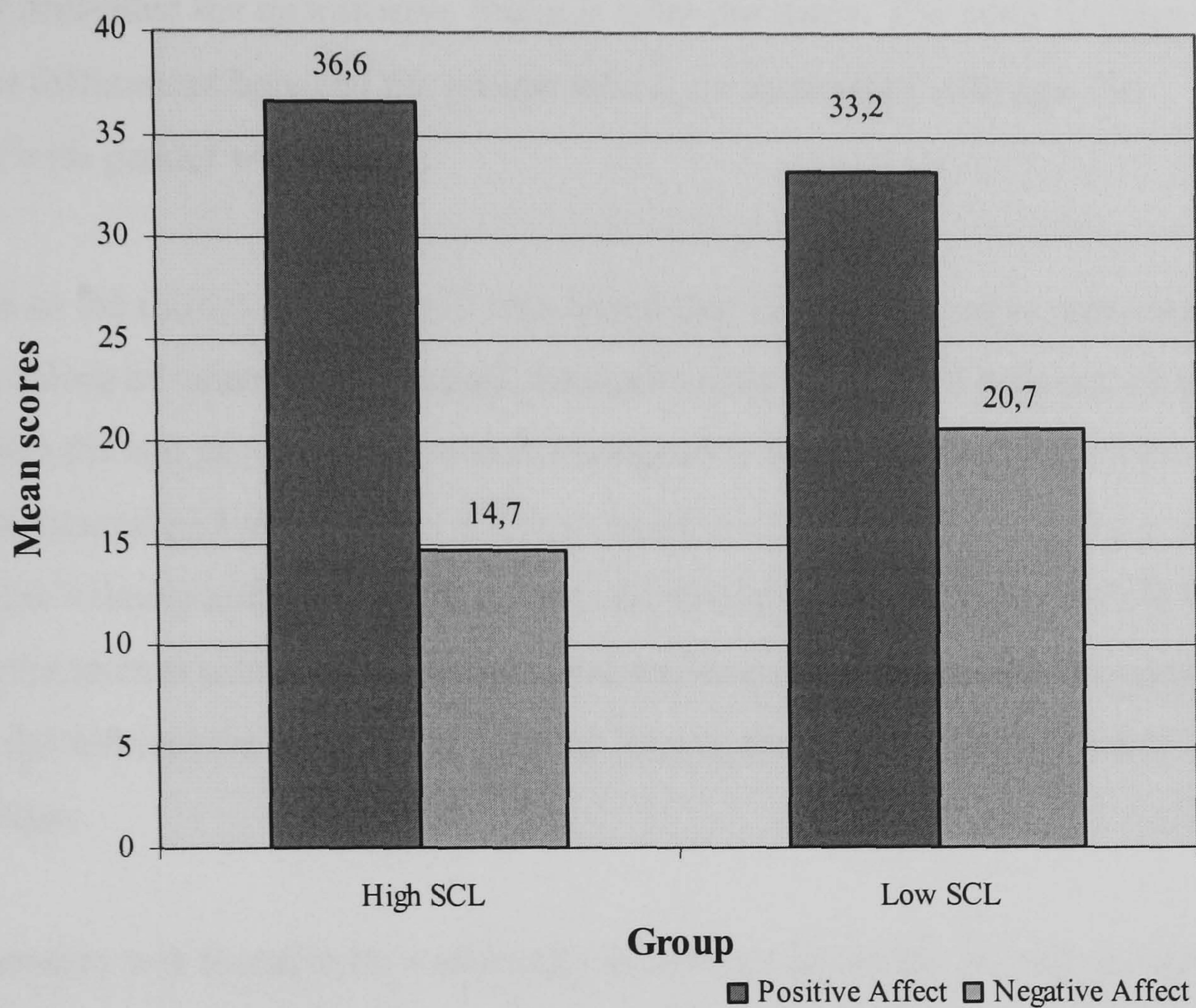


Figure 5.16: High and low SCL groups' scores on PANAS

A one-way ANOVA showed no statistically significant differences between the high and low SCL groups.

No other statistically significant relationships were found.

## 5.6. Chapter conclusions

This chapter presented the quantitative findings from the study. The main findings were that there are differences between the groups which are associated with age. No associations with gender were found.

With regards to the ratings of pictures it was found that there is a positive relationship between the rating of valence and arousal. No statistically significant differences were found between the age groups in the overall ratings of the negative pictures. In the ratings of the neutral pictures, however, it was found that the old age group (65+ years old) rated both valence and arousal higher than the younger groups. Thus, the old age group rated the neutral pictures as more positive and more arousing than the younger groups, but did not rate the negative pictures as less negative or less arousing than the younger groups.

The SCL measure was found to be statistically significant lower for the old age group (65+ years old). For all groups there was a statistically significant increase from baseline to interview, but not from baseline to picture, thus no relationship between subjective ratings of arousal and level of SCL was found. The increase from baseline to interview was lowest in the old age group. The highest increase from baseline to interview was found in the middle age group (35-50 years old)

Overall no relationships between physiological responses and affect (as measured by PANAS) was found, however, although the comparisons between participants with the highest and lowest SCL increase in the interview did not show many differences from the other participants, a relationship between high and low SCL with PANAS scores was found, highlighting potential interesting aspects of a link between physiological measures and affect.

The next chapter will discuss these findings further and in relation to literature.

# Chapter 6: Quantitative Discussion

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## 6.1. Chapter summary

This chapter discusses the quantitative results in isolation (they will be further discussed in relation to the qualitative findings in Chapter 10). The first part of the chapter discusses the results of the ratings of valence and arousal for the International Affective Picture System (IAPS). The second part discusses the skin conductance level (SCL) measures taken during the interview and during the viewing of the pictures. The third part addresses the comparisons of SCL, the Positive and Negative Affect Schedule (PANAS) and the subjective ratings, and the fourth part of the chapter discusses the comparison between the participants with the highest and lowest increase from baseline to interview SCL.

## 6.2. The International Affective Picture System (IAPS)

In the following discussion the age groups will be referred to by the group numbers. Age group 1 is the participants aged 18-21 years old, age group 2 is the participants aged 35-50 years old, and age group 3 is the participants aged 65+ years old.

### 6.2.1. Correlation between subjective ratings of valence and arousal

A statistically significant relationship between the subjective ratings of valence and arousal was found in that increased arousal was associated with higher ratings of unpleasantness for the negative pictures, and pleasantness for the neutral pictures. This was true for all the age groups with regards to both the negative and neutral pictures. Similar results have been found in some other studies (e.g. Cuthbert, Schupp, Bradley, Birbaumer & Lang, 2000), although others have failed to replicate this finding (e.g. Lang, Bradley & Cuthbert, 2001).

### 6.2.2. Mean ratings of the pictures compared between the age groups

There were no statistically significant differences in how the different age groups rated the negative pictures, but statistically significant differences and tendencies were found with regard to the neutral pictures. With regard to the negative pictures, this is not consistent with findings from Gross, Carstensen, Pasupathi, Tsai, Skorpen & Hsu (1997), who argued that emotional reactivity change with age and that there is a “decreased emotional experience of anger, sadness, and fear (but not disgust)” (1997: 595). The present findings might be explained, however, if the negative pictures induced disgust more so than other negative feelings. Upon being asked to describe and/or categorise the pictures, there were no differences between the groups as to how they were described, but there was a tendency for all groups to describe the pictures as gory, gruesome and horrific. Thus, although they were drawn from a widely-used sequence, it may be that the pictures were nevertheless biased towards inducing disgust more so than other negative emotions.

These present findings do, however, support the previous findings from Gross et al. (1997), that there is “increased experience of happiness” (1997: 595) with age, as it was found that the age group 3 had a tendency to rate the neutral pictures as more positive valenced than the other age groups, especially age group 2. There was also a statistically significant difference in the ratings of arousal between age groups 3 and 2, and a near statistically significant difference between age group 3 and 1, with age group 3 rating their arousal as higher than the other groups. However, the differences in arousal are harder to interpret.

Thus, the hypothesis posed in Chapter 4, that there will be differences between the age groups’ valence and arousal ratings of the pictures, is supported in so far as neutral pictures were rated as more positive by age group 3. The hypothesis was not supported with regards to a more positive rating of negative pictures, nor with regards to rating the arousal as being less that of their younger counterparts.

Despite the overall differences, it was only a selection of pictures which created statistically significant differences in ratings between age group 3 and age groups 1 and 2, and these differences were deemed tenuous as they may have been more to do with chance fluctuation as adjusting the alpha level by use of Bonferroni Correction, showed

no significant differences. There was a tendency for age group 3 to rate the valence of the neutral pictures more positively than the younger groups, and rate themselves as being more aroused by both negative and neutral pictures than the younger groups.

One possible explanation for this may be the enhanced emotion regulation proposed by the Socioemotional Selectivity Theory (Turk-Charles, Mather & Carstensen, 2003). Within this theory older people have a tendency to emphasise positive affect – such as rating a neutral picture as more positive. This theory cannot, however explain why the older age group also rated some pictures, both neutral and negative as more arousing. Quite contrary, due to enhanced emotion regulation as well as cultural display rules it would have been expected that any differences would have been in form of less arousal.

If the Bonferroni Correction had not been taken into account, the pictures that did show statistically significant differences, were in many cases found in the arousal rating, not in valence, as 5 out of the 7 pictures that showed statistically significant differences between the old group and the younger groups were in the arousal ratings. If we were merely looking at biological reasons for differences in age groups, there would be no full explanation for this. However, it has been shown that older people might be less willing to judge sensory input until they are sure (Whitbourne, 2002), and so the difference might be explained by the old age group overcompensating. Even though older individuals have already learned to compensate for attenuated sensory stimuli and rely more upon prior experience to judge stimuli (Whitbourne, 2002), they may still lack confidence in their answer. Given this, and lacking the stronger somatic feedback they had previously, they may overcompensate on occasion. To rate how affected one is without certain somatic feedback may be more difficult, than to rate an image on a scale of unpleasantness, where known cultural and social norms can more easily be applied.

With regards to the negative pictures the reason for there being no overall statistically significant differences between the groups concerning valence and arousal ratings, can possibly be explained by categorising them as pictures of disgust (again dis-regarding the strong possibility of the individual pictures' differences being due to chance, as per the Bonferroni Correction). However, this does not explain why there were no statistically significant differences for all the negative pictures, i.e. why did some show

statistically significant differences and others not. The reason may be the picture series itself. Although it is a well tried and tested tool, there may be biases within the pictures themselves. For instance, one of the pictures in the series (which was not used here) is meant to be a neutral picture of the New York skyline – the twin towers of the World Trade Centre - which after recent events can no longer be said to be neutral. Likewise, some of the pictures, which were used here are meant to be neutral, but as these results shows there is such a difference between the ratings that they become non-neutral.

Picture 20, for instance, is a picture of a set of twins whose clothes and hairstyle may sway some towards either positive or negative valence. Picture 16, a mushroom, again may have different connotations, from food and nature to poison and drugs. Thus, some of the neutral pictures may have been inducing emotions.

### **6.3. The measures of the skin conductance level (SCL)**

An objective of this study was to investigate potential age differences in physiological arousal (measured as SCL) when in an explicit emotional situation.

In support of the hypothesis posed in Chapter 4, we did find that age group 3 had an overall lower skin conductance level compared to age groups 1 and 2; it was statistically significantly lower compared to age group 2, and although not statistically significantly lower compared to age group 1, it did show a similar tendency of being lower. This finding may say something quite important about emotions and the feeling of emotion. Having a generally lower skin conductance level in older people can be explained by the physiological ageing process, such as somatosensory changes, or ANS changes. Levenson, Carstensen, Friesen & Ekman (1991), who found a generally lower ANS response in old people compared to young, favoured an evolutionary reason, such as a decreased need for a higher ANS response. Another reason may be that as the ageing process results in a loss of accuracy and a need for increased or intensified stimuli to elicit a response, the emotion that takes place (in Damasio's form of a bodily reaction), is less intense compared to a younger person. It is interesting to note that even if there is no statistically significant difference between age groups 1 and 2, the downwards trend of attenuated SCL can be seen in how age group 1 has the highest

baseline, age group 2's is attenuated in comparison, and age group 3 has the lowest SCL baseline.

### **6.3.1. SCL in the interview**

For all the age groups there was a statistically significant increase in SCL from baseline to the interview. There were also statistically significant differences between the age groups, with age group 2 having a statistically significant bigger increase from baseline to interview compared to age group 1, and showed a similar tendency compared to age group 3. There are several interesting points here. Firstly, the difference between age groups 2 and 3 was almost significant, showing that age group 3 still has physiological arousal in response to emotional memories. Secondly, it indicates that participants in the middle aged group were the ones who became most physiologically affected by the telling of an emotional event. This would lend some support for Levenson et al's (1991) preference to explain the lesser ANS response in older adults in terms of evolution, as the middle age group is the group who are most likely to have a heightened ANS response. However, although Erikson's (e.g. Gleitman, Friedlund & Reisberg, 2000) life cycle theory is perhaps a bit dated now, some of the issues he points towards are still relevant, such as the tendency to focus on work and children in midlife. It could be that because the middle age group are in that stage of the life where they need to make things count – relationships, work, children – that they are more affected by emotional events. Thus, it may be that there is something in the middle age group that is different from the young and old group. Possible reasons for these differences will be discussed further in Chapter 10, in relation to the qualitative findings.

### **6.3.2. SCL during viewing of the pictures**

There were no statistically significant changes from baseline to viewing the pictures in any of the age groups, and thus no statistically significant differences between the groups. Thus, while the age groups' physiological responses were different with regards to baseline levels, there were no differences between them when viewing emotion inducing pictures.



### 6.3.2.1 SCL compared to valence and arousal ratings

The IAPS is a validated emotion inducing stimuli, and therefore a physiological increase from baseline to viewing the pictures was expected (e.g. Gross & Levenson, 1993, Levenson, Carstensen & Gottman, 1994). The fact that the hypothesis was not supported in that there was no increase in SCL from baseline to picture viewing, in any of the groups, was thus unexpected, but might in part be explained by the chosen methodology. Hariri et al (2003) found a tendency in some of their participants to have a lower level of skin conductance in viewing conditions which involved tasks such a labelling as compared to passive viewing. In the present study, participants were asked to rate the pictures for valence and arousal, and this may have led to a less increased physiological response. Hariri et al.'s (2003) findings were tentative as it was not found in all their participants. Hempel, Tulen, van Beveren, van Steenis, Mulder & Hengeveld (2005) recently found that positive pictures increase SCL more so than negative and neutral pictures, but not that there was no SCL to negative pictures.

Even if the methodology can explain the lack of increase in SCL in all groups, it does not explain the similarities found in the subjective ratings across the age group, and most importantly, that this lack of increase did not seem to be related to the subjective ratings of emotion (arousal and valence). That there was a discrepancy between physiological and subjective responses, supports the study of Kring & Gordon (1998), who found that reported perceptions did not always correspond to objective emotions expression.

Although the choice to use a rating of the pictures rather than passive viewing may be in part responsible for the lack of increase in SCL from baseline to picture viewing, it seems reasonable to look for other explanations outside of methodology. One reason may be in how subjective ratings are influenced by cultural norms. When shown a picture of an emotional negative situation there is a whole range of social and cultural rules that step into play. Researchers have long been investigating display rules with regard to emotion, but these rules might not only apply to facial expressions. With few exceptions all participants rated the negative pictures as unpleasant. It would take someone special to look at a picture of e.g. a woman lying shot dead in a crowd of people (picture 22) not to say it is unpleasant, or to say that one is not affected by it. It is perhaps easier to look at a picture of a severed hand (picture 25) and remain fairly

neutral on both valence and arousal account. It may be thought of as being against social morals, or in Benson's (2003) terminology as 'unthinkable', to find a picture of a shot and dead woman pleasant, whereas a severed hand may not in the same way have 'bad' connotations. Young or old, there are some things which are morally acceptable to get used to seeing, and which perhaps can be categorised as a more 'disgusting' rather than 'upsetting' category; and other things which, regardless of exposure, are still morally and culturally categorised as being unpleasant and upsetting to watch.

The pictures were shown for a short time only, to prevent the participants having time to think too much about each picture, in order to get a 'gut reaction'-rating, i.e. the participants would make use of somatic markers. However, somatic markers, are influenced by and even embody cultural and social norms, and so may be part of our learned response to something that symbolises a cultural negative. We, as a culture, have already determined what we see as negative, positive and neutral: in few (if any) contexts can a woman shot through her head be positive, or a smiling baby negative. But, as discussed above, there may be some borderline pictures with varied connotations, such as mushrooms, and our understanding of what a picture means socially, culturally and emotionally, can change, as association has with a picture of the twin towers.

Another reason for the lack of 'emotion reaction' to the pictures may be found in habituation to the stimuli. When the participants were asked whether they had been exposed to this type of picture before, most said that they had - especially in news, documentaries, and on the internet. Although the IAPS manual asks researchers not to use these pictures outside of research situations, the *type* of pictures it contains are now often seen in various media. This increased exposure to this form of stimuli may mean that while the *subjective* response is as expected – being affected (aroused) and negative pictures are perceived as unpleasant, the *actual* physiological emotion is attenuated.

Such habituation makes sense both from biological, cultural, developmental and emotional points of view. Habituation "refers to the decline in the tendency to respond to a stimulus once it has become familiar" (Gleitman et al., 2000:98). If we did not habituate to emotion images, we would constantly be physiologically aroused, and this

would take precedence over other matters, thereby hugely (negatively) influencing our well-being. Brain studies, however (e.g. Gur et al, 2002; Hariri et al, 2003; Taylor et al, 2003), which have used the IAPS to investigate which different brain regions become activated when looking at emotional stimuli, both in passive viewing and viewing with rating, have found that the brain clearly reacts to these images and differentiates between them. The possible discrepancy between these findings and a possible habituation to these types of pictures, may be explained by Damasio's (1999) theory of the 'as if body loop', which might be understood as one of the systems whereby habituation is enabled. That the body proper does not react (with for instance increased SCL) does not, however, mean that the brain does not encode the stimuli 'as if' the body had been activated.

The second hypothesis posed in Chapter 4, was that there will be differences between the age groups' SCL change from baseline to emotional stimuli. This was not supported with regards to the pictures, as none of the age groups' SCL increased. It was, however, supported with regards to the interview, only it was found to be age group 2 which differed from the other age groups.

## **6.4. Comparisons between SCL, PANAS and Subjective Ratings**

### **6.4.1. How long ago did the event happen**

The finding that there is a statistically significant difference between group 1 and group 3 regarding how long ago the event they talked about happened, is not surprising as the older age group by default have access to memories that are much older. The fact that there is no relationship between how long ago the event took place and any of the subjective ratings, PANAS or SCL, suggests that it is not the age of a memory in itself that determines how affected a person will feel when talking about it. This is contrary to intuitive belief, but is supported by Foster & Webster (2001) who examined the relationship between physiological responses and the age of a memory, and found the greatest physiological responses in older memories of young women.

Literature shows that in open recall the memories remembered most often occur between the ages of 10-25 years old (Neisser & Libby, 2000). Although all groups,

even the old, convey memories from this time of their lives, they do not exclusively do so. This may well be because that although the memory was free to recall, it did have to have had emotionally significant impact on them. With issues such as loss of loved ones or traumatic events, it is not given that that type of memory would fall in the age range 10-25 years old.

### 6.4.2. PANAS and Subjective Ratings

There were no statistically significant differences between the groups with regards to their scores on PANAS. This is a somewhat surprising finding, as previous research has argued that older people have less negative affect (e.g. Berntsen & Rubin, 2002). The present findings indicate that although there may be physiological differences and changes as we age, we do not 'lose' our subjective perception of our positive or negative affect. If older people were predominantly actively trying to regulate their perceptions towards a positive outlook or allowing less negative impact (Charles et al., 2003) it would have been expected to find more old people showing a higher positive affect, or lower negative affect. As it was, it was the middle age group that showed the highest mean scores on Positive Affect and lowest mean scores on Negative Affect.

However, the subjective ratings showed a statistically significant difference between age groups 3 and 2 with regard to feeling negative immediately after the interview, with age group 3 reporting significantly less negative affect. This cannot just be explained by physiological reasons as in less physiological arousal, as we then would have expected repeatedly to find differences in subjective responses. Nor can it be explained by an overall positive or negative affect as argued above. A possible explanation is found in the Socioemotional Selectivity Theory: older people consciously regulate their emotions, not because they *cannot* feel so negatively aroused any longer, but because they *chose* not to.

These findings are also interesting in terms of age group 2. They scored the lowest mean scores on Negative Affect in PANAS, and they were the ones that had the biggest change in SCL from interview baseline to interview. This would indicate that while they as a group are not showing increased Negative Affect in general, they are

markedly more affected by their telling of a negative personal event. This finding will be discussed further in Chapter 10.

The subjective ratings showed relationships between being affected and feeling negative now and then, and feeling negative now was related to feeling negative then, suggesting that participants' re-experience did indeed induce a similar feeling of emotion. However, this came as a surprise to many of the participants. Although the nature of the study was revealed to them from the very beginning, and they were explicitly asked to remember and try to re-experience the event, focussing on images and details, many participants stated after the interview that the feelings they had experienced during the interview had come as a surprise to them. A few participants showed explicit signs of the felt emotions and started crying during the interview.

When asked to rate how they felt now and then, many (especially middle age group and old age group) said they were surprised at how affected, or how negative, they still felt. Some in the oldest group revealed things and thoughts which they said they had never really talked about before.

There were no differences between the groups with regard to what they talked about, i.e. themes, but Chapters 7, 8 and 9 will specifically analyse the interviews regarding differences and similarities in how emotion is discursively constructed in the age groups.

## **6.5. Comparisons between highest and lowest increase in interview SCL**

In order to see whether there was a difference in the composition of those with a high increase from baseline to interview (high SCL) and low increase from baseline to interview (low SCL) in the skin conductance level, 10 participants with the highest and 10 participants with the lowest SCL increases were identified. These groups consisted of participants from all three groups and represented all the themes, and thus showed that asking participants to talk about a significant emotional event will generate an emotional response regardless of what type of event is talked about. With regards to PANAS no statistically significant differences were found between the high SCL and low SCL groups. Although their scores were within the normal range, an interesting

trend was found: those with high SCL had high positive affect and low negative affect, and those with low SCL had low positive affect and high negative affect. This finding was found to be statistically significant, and is interesting as it was not found to be the case in the sample overall. It does, however, support Lang, Rice & Sternbach's (1972) tentative finding of relationships between emotional affect and physiological responses, and as it shows no other relationships with age or sex, it is perhaps a finding that deserves further research.

## 6.6. Chapter conclusions

This chapter discussed the findings of the quantitative results. The main questions to answer was if emotion changes across the life span, and following our definition of emotion, we were looking at when the emotion as a neural activity generates a biologically change related to body state and cognitive state and is perceived and *felt*, consciously as the feeling of emotion. The body state measured here as SCL did change across the life-span. SCL decreases with age, and age group 3 showed a significant lower baseline level compared to the other age groups. However, despite the level, the 'emotion reaction' seemed to be similar for all age group with an increase from baseline during the interview, but not during the viewing of the pictures. Age group 2 showed the largest increase in SCL when talking about an emotional event. The subjective ratings of emotions – which we take to represent the feeling of emotion, did also show age differences. Age group 3 had a tendency to rate neutral pictures as more positive, and to rate their arousal higher when viewing both neutral and negative pictures.

The interview part of the study showed many similarities across the age groups; they talked about similar types of events, and the time aspect (how long ago it happened) did not seem to influence the subsequent ratings of affect. It was found that age group 3 had a tendency to rate their subjective negative feeling after the interview lower than the younger groups.

The findings from this part of the study will be discussed further in relation to the qualitative findings in Chapter 10.

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# Chapter 7: Narrative Analysis: themes and structure

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## 7.1. Chapter summary

This chapter introduces the narrative analysis, emphasising the themes and structure of the narratives. The chapter begins with an overview of the themes and sub-plots found in the narratives and the length of the narratives in each of the age groups are outlined. The chapter then discusses the narrative structure through issues such as the narrative format and how the narratives are classified as being progressive, stable or regressive narratives with positive or negative tone. The participants' emotional involvement in their own narratives will also be analysed and discussed, and the chapter ends with an analysis and discussion of the use of metaphors and rhythm in the narratives.

## 7.2. Introduction to the narrative analysis

Narrative analysis is a formal way of analysing the structures of a constructed narrative. As Riessman (1993) suggests it “does not fit neatly within the boundaries of any single scholarly field... [and it is] inherently interdisciplinary” and as such it is ideal to form the basis of a mixed methodology study on the qualitative analysis. Discourse analysis was initially offered a novel way of gaining understanding of issues in social and cognitive psychology, such as memory or attitudes, and how accounts are constructed to purposefully manage issues such as stake, interest, or motive. By combining narrative analysis with discourse analysis it was hoped that the narrative analysis could highlight differences or similarities on how people talk about an emotional event – whether it follows a typical narrative structure, or whether the individual take on the event takes precedence of the account; and it was hoped that the discursive analysis could add depth to the way people talk about the emotional event and especially highlight how they would position themselves in relation to the event and perhaps thereby the emotion. For a full discussion on how the narrative and discursive analysis was combined in practice, please see Chapter 4, part 4.5.5.1.

### 7.2.1. Overview of narrative themes

The narratives were grouped under four themes, 'loss', 'trauma', 'other', and 'positive story first'. Table 7.1 below shows how many in each group talked about each theme:

Table 7.1: Overview of themes in the interviews

Age group	Loss	Trauma	Other	Positive
18-21 years old	7	7	5	3
35-50 years old	5	6	1	2
65+ years old	8	5	2	1

This analysis will mainly draw upon the trauma narratives. There were 18 trauma narratives. Fourteen were selected - 2 by males, 12 by females. Group 1 (18-21 years old) consist of 5 people (including the two males), Group 2 (35-50 years old) consists of 5 people, and Group 3 (aged 65+) consists of 4 people. Of the 4 de-selected stories 3 was about lifelong illnesses and were thus quite different from the other shorter events talked about in the rest of the trauma narratives. The tape quality of the remaining narrative was too poor to use.

The stories were varied and covered events such as divorces, accidents, illnesses, and family feuds. Common for them all was that the participants rated them as being highly intense and highly negative experiences at the time, and when re-experiencing them. Apart from one of the older participants, all of them rarely talked about the event, but thought about it often. DSM-IV (APA, 1995) defines trauma as events involving potential or actual death, serious injury, or other physical threat to oneself or others, and states that responses to this event are intense fear, horror or helplessness. Some studies of trauma, however, have emphasised unpleasantness more so than fear, and thus included events which draw more on psychological trauma such as anything that threatens the integrity of the ego (Berntsen & Rubin, 2002). This definition is used here and the narratives thus consist of both threats to the physical and psychological. A summary of the trauma narratives used in this analysis can be found in Appendix 10. It gives the key data such as gender, age, a short summary and length of their story, how long ago since the event took place, and the interviewer's perception of the participants' demeanour during the interview.



### 7.2.2. Sub plots within the trauma narratives

Within the trauma narratives the underlying sub-plots were classed as either divorce or other unsettling event:

#### *Divorce of parents or of one self*

Six stories were of divorce, of these two were of parents' divorce, both of these told by the young age group, three divorces were from the middle age group, and one from the old age group.

#### *'Un-settling incident' involving a significant other*

These stories cover a range of events, but the common factor in them is that they involve a significant other.

Own child: three stories; two from the middle age group, one from the old age group.

Parents: three stories; two from the young age group, one from the old age group.

Sibling: one story, from the young age group.

Family: one story, from the old age group.

### 7.2.3. Length of story

The average length of the stories was 26.9 minutes. Group 1: 23.4 minutes; Group 2: 33.6 minutes; Group 3: 23.7 minutes. The main reason that the mean length of the stories in Group 2 are longer than in the other groups is that Fiona's story was more than an hour long.

## 7.3. The narrative structure

The narrative structure in the stories was analysed through looking at the format of the stories and classifying them according to the narrative development and tone. This part of the analysis also investigated the participants' emotional involvement in the narratives, looked at the typical features of a narrative, such as use of metaphors and rhythm. Differences between the time span of the stories are investigated and the interaction in the interviews are outlined.

### 7.3.1. Basic narrative format

The narrative structure can be discussed in ways ranging from the strict labovian structure, in which there are several keys that need to be fulfilled: a summary; orientation to place, time, characters and situation; complication action; evaluation; resolution; and ending, to a simple structure with a clear beginning, middle and end (e.g. Riessman, 1989). As discussed in Chapter 4, the analyses here drew on narrative analysis, informed by discourse analysis. The majority of the trauma narratives here could be categorised as following a simple basic structure, which is typical of personal narratives and is defined with respect to the plot and the characters in the story (e.g. Crossley, 2000).

A typical beginning in the trauma narratives began with ‘hmm’ or ‘well’ followed by either a statement of when/where it was (orientation to place, time and characters), or straight on to the essence of the event (complicating action):

‘Hmm (.) I think it was when (.) hmm (.) my dad reappeared at home after a year’ (Serena, line 1.)

‘Right (.) hmm (.) well (.) three years ago (.) hmm (.) I was hmm (.) at home’ (Christopher, line 1)

‘Hmm (.) so (.) well (.) the first thing that comes to mind was it was about four or five years ago’ (Vanessa, lines 1-2)

‘I think really it all had to do with about when I had my first child er (.) which was 18 years ago’ (Fiona, lines 2-3)

‘Right (.) well (.) one particular event er (.) it was probably (.) my daughter’ (Susan, line 1)

‘Ok (.) hmm, when I was eight years old’ (Stephanie, line 1)

The middle of the narrative typically told of the main event and often contained a reflection of why it happened, or why they reacted the way they did, and lead to the end of the narrative. This was often an evaluation of themselves:

'but I think it's been (.) a lot of my deepest emotion has been (involving my) children and my perceptions of myself and you know (.) I (.) I feel that I've failed and I think it's that (.) you know (.) and even now there's still that sort of guilt I suppose (.) thinking (inaudible) so (.) I'm sure it is (.) I'm sure it is'. (Fiona, lines 223-227)

'after all these years (.) you know (.) how (.) you know (.) what went wrong (.) there must have been something wrong with me or he wouldn't have done it er (.) it was my sort of feeling you know (.) er (.) and you know (.) that's (.) I suppose is the biggest emotion that I've had' (Alice, lines 41-44)

'But I've never forgotten it (.) and I've never hated her for what she did (.) like some people say to me (.) oh (.) I'd never want anything to do with her doing that (.) giving you away' (.) but no (.) it's never (.) never made me horrible towards her (.) no' (Dorothy, lines 36-39)

If the end was not signified by an evaluative statement, there is typically a statement which left no doubt about it being the ending:

'And that's what [happened] (.) is that enough' (Penelope, lines 47-48)

'Erm (.) that was it really' (Jennifer, line 33)

'That was (.) that's probably the thing that springs really (.) that I can remember' (Vanessa, line 19-20)

'So yeah that is (.) that's the memory' (Christopher, line 89)

### 7.3.2. Threefold classification scheme and narrative tone

The principles of the ‘Threefold classification scheme’, in which the narrative can be described as being either progressive (a positive outlook, learning from the experience), regressive (negative outlook, not able to move on) or stable (the event has not changed the person’s outlook) (Gergen & Gergen, 1986) underpinned many of the trauma narratives. The narratives can also be categorised with regards to the ‘Narrative tone’ (Crossley, 2000), which can be either optimistic or pessimistic (for further description of these please see Chapter 4, part 4.5.5.).

Table 7.2 below gives an overview of how many in each age group made use of the progressive, regressive and stable story.

**Table 7.2: Progressive, regressive and stable narratives compared between age groups**

Age group	Progressive	Regressive	Stable
18-21 years old	2	0	3
35-50 years old	2	1	2
65+ years old	3	1	0

As can be seen from the table, all age groups made use of the progressive narrative. The regressive narrative is used by the two older groups only, and is the least used narrative form. The stable narrative was used by the young and middle age group only. Following are examples of the progressive, regressive and stable narratives.

#### 7.3.2.1. An example of a progressive narrative

Jennifer’s narrative is an example of a progressive narrative. The event was a negative one (a split up from her husband), but the way she constructed the narrative showed that she had accepted what happened and moved on. Her narrative up until the point of the following extract had been about how she one night arrived home late after work travel, and an argument about dinner escalated into her husband leaving the house for the night. She constructed her narrative in a way that signified that the split between her and her husband ‘had kind of been building up for ages and ages’ (lines 141-142), in this way indicating that it came as no surprise to her when it became the outcome of an argument as can be seen in the following extract:

**Extract 7.3.1.P9 Jennifer**

141 Er (.) I think I knew right from the word go because it (.) it had kind  
 142 of been building up for ages and ages (.) er (.) I saw that that kind of  
 143 (.) me going (.) it was like oh well (.) that's it now (.) er (.) you know (.) I  
 144 could start kind of (.) that's the kind of break that (.) that we need (.)  
 145 er (.) I think right from the beginning it was right (.) that is it (.) now (.)  
 146 you know (.) I've made that break (.) it's something that I've been  
 147 thinking about for a little while (.) you know (.) I can't kind of go  
 148 back on it now and (.) you know (.) otherwise we're back to square  
 149 one whereas (.) I don't know (.) afterwards he wanted to try (.) keep  
 150 trying again and I was like no (.) because I know as soon as I go  
 151 back I just felt that I wasn't the type of person that could  
 152 instigate a (.) you know (.) I couldn't just coldly walk out on  
 153 someone (.) and the fact that we'd had an argument and he'd  
 154 brought it up (.) we (.) which was (.) was why it (.) I think (.) that it  
 155 happened (.) I think if we hadn't have had an a (.) argument it  
 156 would have just kind of (inaudible) there for (.) till whenever (.)  
 157 it did

In the progressive narrative Jennifer constructed herself as having an active role in the split up. This can be seen in lines 145-148 where she admitted to having thought of ending the marriage. Through this construction she acknowledged her own part in the break-up – ‘I've made that break’ (line 146), and further stated, in lines 147-150, how her husband later tried to patch things up, but she would not go back. However, she modified her responsibility in the break-up by following these statements up with a construction of herself as a person who would have continued the marriage had *he* not instigated the break up (lines 153-154), because she would not want to ‘coldly walk out on someone’ (lines 152-153). Thus she constructed *him* as the instigator of the break up, and herself as actively *not* doing anything to stop it happening, without though taking responsibility for it happening – ‘and he'd brought it up (.) we (.) which was (.) was why it (.) I think (.) that it happened’ (lines 153-155). It is an important distinction in the construction of who is at fault. By constructing her husband as the instigator, and explaining why she could not go back, she constructed herself in a much better light than if she had also instigated the break up, not just prevented reconciliation. But importantly here in characterising this as a progressive narrative, she did not construct herself as a victim, but as a participating actor in the event that took place. Further evidence of the progressive nature of her narrative can be seen later in the interview

when she talked about guilt and failure, but she talked about it in past tense – ‘I felt a bit of a failure’ (line 172), thereby constructing it as something she felt then, not now. The narrative tone in this extract is more neutral than either positive or negative. She did not try to construct her husband or the argument in a negative or positive light, but used neutral statements such as ‘it was like oh well (.) that’s it now’ (line 143) instead.

In the following example of the regressive narrative, the situation was also a divorce, but Alice’s construction of events and responsibilities was opposite that of Jennifer’s construction. The construction of surprise was an important element in these two narratives of divorce with regards to whether the narrative was constructed as progressive or regressive. If the break-up happened following a time of arguing it was perhaps easier to construct a progressive narrative in which the narrator can construct herself as moving forward, as in the case of Jennifer. As the following extract shows, Alice constructed a narrative in which she had had no forewarning of her husband wanting to end the marriage, and she constructed her narrative in such a way that her husband was the culprit. This narrative construction allowed her to construct herself as the ‘dismissed’ part feeling helpless and without choice, thus making for a more regressive narrative.

#### 7.3.2.2. *An example of a regressive narrative*

Alice’s narrative is an example of a construction of a regressive narrative. Prior to the following extract, Alice has constructed a narrative in which she said how she had no idea that he was seeing another woman, and even after the split up said to him that she could forget and forgive if he would come back (which he did not). Her narrative up until the following extract had been about how her husband had told her that he was leaving her for a younger woman. She had also been talking at length about how their divorce had had continued consequences, such as problems at their daughters’ weddings. Her construction of herself in relation to the divorce was very different from that of Jennifer’s, as she constructed herself as a victim with no a choice in the matter of the break-up. The regressive nature of her narrative can be seen in the following extract:

**Extract 7.3.2.P25 Alice**

160 Yeah (.) there's the sort of thing (.) well (.) I still feel it shouldn't have  
 161 happened because we got on all right (.) I mean we ne (.) we never  
 162 shouted at (.) well (.) we got on all right so long as I went along with it (.)  
 163 you know (.) (inaudible) er (.) well (.) some days I (.) I still think about it (.)  
 164 you know (.) particularly these dark (.) long days outside and if you're on  
 165 your own indoors and (inaudible) when you start thinking about it

Although she tried to construct a narrative up until this point of her having accepted the end of the relationship, and her husband leaving her, it was a weak construction which she undermined in lines 160-162 by her use of present tense - 'I still feel it shouldn't have happened', and in line 163 'I still think about it'. She explained her position and her right to persist in not moving on by a construction of her belief of how a marriage should not be split as long as the relationship is working – 'we got on all right' (line 162). Contrary to Jennifer, who constructed herself as taking part responsibility for the break up of the marriage, Alice here constructed herself as a woman who 'went along' (line 162) with her husband's wishes. Her construction of fault thus lay with her husband alone, not with her. This idea of marriage is found in other divorce stories, and possibly signifies a cultural point of view of the marriage institution, which ultimately has consequences for the idea of the psychological subject. If a woman believes her marriage is functional because she does everything she believes a wife should, and this marriage then breaks up, she is in a situation where she believes she did nothing wrong, but still was not 'good enough'. In this extract Alice constructed herself as having done nothing wrong, so 'it shouldn't have happened' (lines 160-161). The end result was that she ended up being 'on your own' (line 164-165), 'thinking about it' (line 165). The regressive nature of her narrative is then found in that she has not, like Jennifer, come to terms with the divorce, and she was and still is, at the time of telling the story, doing nothing to move forward with her life. Whereas Jennifer also 'felt a bit of a failure' (Jennifer, line 172) because her marriage did not work out, her construction with past tense signified that feeling as a past feeling, not as is the case with Alice's construction a present day feeling. As was the case with Jennifer's narrative, the tone of Alice's narrative was predominantly neutral. Apart from one point where she says 'I wanted to get (.) over and bang her head on (.) against the wall' (line 221) she made no use of negative words towards her husband, nor his new wife. This lack of negative tone was however, also constructed as a conscious effort to avoid being negative as can be seen

in one statement in line 219: ‘you can’t take f-words back once you’ve said them can you’ thereby constructing herself as making the effort to behave morally appropriately, rather than saying insulting things to or about the husband.

### 7.3.2.3. *An example of a stable narrative*

Christopher’s narrative is an example of a stable narrative. His story was about his brother’s brain tumour, and how his family (mother, father and brother) had all been trying to come to terms with the brother’s diagnosis and following operation.

Throughout the narrative he constructed his brother’s illness as being very upsetting for everybody. Rather than emphasising the illness of his brother, Christopher structured his narrative around his own helplessness in not knowing what to do, or how to make things better for the people he loves, i.e. the brother and his parents. The following extract shows how “life simply goes on” (Gergen, 1998:1), which is the mark of a stable narrative.

#### **Extract 7.3.3.P44 Christopher**

83 Hmm but (.) he’s got (.) he’s much better now but he’s still (.) every time (.)  
 84 he’s still obviously got the scar down the back of his head (.) and a few  
 85 physical (.) not deformacies but anomalies sort of thing hmm and that’s  
 86 (.) there is still twinges when you see it (.) but if you think about it (.) or  
 87 say (.) it happened in sort of November time so when it gets to that time  
 88 you sort of start thinking again what it could have been like if it had  
 89 been different or (.) I mean its not (.) it’s not nice but its good to know  
 90 that he’s over it and recovered and everything

Here Christopher constructed his account to show that even though it had been hard, and there was still physical reminders of his brother’s illness (lines 84-85), and he still thought about it (lines 86-89), ‘he’s over it and recovered and everything’ (line 90), thereby constructing the statement to indicate that because his brother has ‘recovered and everything’ he himself was also over it. In lines 87-88 Christopher notes that he still thinks about it ‘when it gets to that time’, but he did not, as was the case with Alice’s construction, describe it as having continuous devastating consequences; instead he constructed his present time thinking about it as reflection of what might have been, furthermore using ‘you’ instead of ‘I’ to remove himself further from the



statement. The stable narrative can be seen in how he actively constructs the event as having had no wider influences.

As with the two other examples, the emotional tone in this narrative was also neutral. This neutral tone was found to be the case for the majority of the narratives and will be further discussed in the following part.

### 7.3.3. The construction of neutrality in the narratives

As mentioned before, none of the narratives were ‘pure’ progressive, regressive or stable, with a constant emotional tone, but a mixture in which one was typically predominant as the above examples have shown. That the majority of narratives made extensive use of neutral tone were rather unexpected considering the themes and the nature of the narratives. However, it was not just the narrative tone that was used to construct the neutrality. The following part discusses how neutrality and emotional involvement were constructed in the narratives by looking in detail at neutral tone, emotional involvement and some of the rhetorical devices used to weaken or strengthen statements.

In addition to the narratives being progressive, regressive or stable with neutral, positive or negative tone, the participants’ emotional involvement in their narratives was found to be to a greater or lesser extent. For some, the retelling of the event brought forth emotions which they had not expected, as for instance Susan, who from the outset got emotionally involved and in line 2 stated: ‘actually it makes me cry to think about’ (which it did). Her story was from 11 years ago, when her baby daughter stopped breathing. Prior to the following extract she has talked about the event itself, and about how she forgot all she had learned as a nurse and did not know what to do. The following extract is from near the end of the interview, when she was asked what she feels when she thinks about it now:

**Extract 7.3.4.P30 Susan**

112 well (.) I felt absolutely fine till I (.) till I mentioned it to you  
 113 which is really strange (.) because it’s not something I’m  
 114 tempted (.) it’s not sort of something I tend to think about  
 115 like (inaudible) I (.) I’m really surprised by the results (.) that

116 I still feel upset about it (.) because I (.) I am quite sort of  
 117 (inaudible) because I felt sort of completely (.) no (.) I  
 118 certainly haven't forgotten about it because it was quite a  
 119 (.) you know (.) quite an emotional event (.) but I didn't think I  
 120 was (inaudible) expecting to be terribly emotional about  
 121 it

Her involvement in her narratives was shown by how she in this extract made use of emotion related words – ‘I felt’ (line 112 and 117), and ‘I still feel upset’ (line 116), as well as revealing that her expectation prior to her participation was to not ‘be terribly emotional about it’ (line 120-121). Furthermore she made extensive use of ‘I’.

According to Harré (1999) the use of ‘I’ is firstly to “take responsibility, or to make a commitment” (Harré, 1999:102). In autobiographical narratives it is also an ‘embodied I’, where “telling about an event in the first person places the speaker at or near the event in question... This ‘I’ is embodied, is one person, and is placed in ‘space and time’” (Harré, 1999:103, 102). Thus, by making use of ‘I’ she was actively constructing herself as being there, taking part in the event, physically and mentally. This use of ‘I’ was found throughout her narrative in uses of ‘I remember’, ‘I was thinking’, ‘I was (doing something)’, I feel, I felt and I am.

Considering how emotionally involved Susan constructed herself to be by relating how the event still affected her, this following extract, also from Susan, shows how a significant emotional situation can be played down by the use of words which could as easily have been used to relate a less emotional event.

**Extract 7.3.5.P30 Susan**

20 I just remember looking at her thinking oh (.) my goodness (.)  
 21 what shall I do here

In this extract she constructed her statement as factual ‘I remember thinking’ (line 20), using ‘I’ to present herself as a witness, being there. However, considering that this statement referred back to her baby daughter, who had stopped breathing, it was a very mild and generally applicable statement to say that she was thinking ‘oh (.) my goodness (.) what shall I do here’ (line 20-21). Susan chose to construct her narrative at this point using neutral words and commonly used phrases which could be applicable to

almost anything. She could be talking about her car breaking down rather than the potential death of her daughter.

Like Susan, Christopher was also emotionally involved in his narrative, but in a different way. The following extract exemplifies how using ‘you’ instead of ‘I’ construct a narrative which serves dual purposes – one to distance oneself from the content, and two, to make the statement commonly applicable:

**Extract 7.3.6.P44 Christopher**

62 Hmm but as I say my parents were still upset (.) relieved (.)  
 63 upset (.) whatever emotional and that’s hard to get (.) hard to  
 64 grasp when you don’t fully understand what’s going on (.)  
 65 you still (.) you’re still pretty much a kid at the time (.) hmm so  
 66 I didn’t really know what to do (.) I didn’t really know  
 67 where my place was and what I was supposed to be doing  
 68 which is (.) which was difficult for me cause I wanted to do  
 69 something but I didn’t know what it was I could do

By using ‘you’ instead of ‘I’ Christopher constructed his narrative in a way that allowed him to distance himself from the emotions he saw his parents’ experience, emotions which were ‘hard to grasp’ (line 64). He further constructed his explanation of this lack of understanding through his age – ‘you’re still pretty much a kid at the time’ (line 65). This particular construction served to generalise and normalise why he couldn’t ‘fully understand what’s going on’ (line 64), drawing on cultural expectations that children are not necessarily expected to understand what happens and why. However, by switching back to the use of ‘I’ in line 66 and forward, his construction allowed him to come across as emotionally involved also. Where his parents were ‘upset (.) relieved (.) upset (.) whatever emotional’ (lines 62-63), he found it ‘difficult’ (line 68) because ‘I didn’t know what it was I could do’ (line 69).

Like Susan in extract 7.3.5.P30, Jennifer made use of phrases which could be commonly applicable to anything and did not in themselves signify the relation to an emotional event. This following extract is from when Jennifer has been asked to talk in more detail about what happened that night she and her husband split up.

**Extract 7.3.7.P9 Jennifer**

119 I'd just walked in (.) you know (.) expecting you know (.) a nice  
 120 welcome (.) and then it's kind of (.) half an hour later it ended like  
 121 hmm (.) he's gone (.) you can't believe it kind of thing

Considering that at this point in the story she had just talked about how her husband left her after an argument that begun over her not wanting dinner, there are many other ways she could have constructed how she felt. Instead she constructed a statement in which she used 'you', thereby detaching herself from the statement and making it commonly applicable. 'You can't believe it kind of thing' (line 121) is a statement which could be referring to just about anything – something that has happened in the news, on the job etc., it is not a statement that signifies the importance of what she was talking about. Talking about the break up of a marriage is something emotionally and personally important and more emotionally laden statements would not have been out of place in the narrative.

Another way of constructing neutrality was by weakening a statement by modifying it, both through the means discussed above, but also by constructing neutrality by constructing events and feelings as being neither too happy nor too unhappy. The following extract is taken from Stephanie. This is the beginning of her narrative in which she explained how her parents divorced and her mother decided to return to her home country. Here we can see how Stephanie managed her narrative in order to remain neutral between her parents in her account of how it made her feel to leave her home in England and her father:

**Extract 7.3.8.P33 Stephanie**

5 I didn't really appreciate being taken away from it (.) and I (.)  
 6 I was just like a typical girl (.) I adored my dad so (.) I  
 7 resented her for taking me away from him (.) hmm (.) but it  
 8 didn't (.) it didn't mean that I didn't love her or anything  
 9 though cause she was always like (.) she still is like one of  
 10 my closest friends really (.) I just didn't like that particular  
 11 action (laughs)

In this extract she was constantly modifying her statements. Talking about being uprooted from her father and her world, she used very mild statements, such as line 5, ‘didn’t really appreciate’, and lines 10-11 ‘I just didn’t like that particular action’. Here she constructed herself as almost detached from her negative feelings by not using negative emotion words, such as ‘hate’, for the negative feelings, but instead rhetorically negated the positive words by saying ‘didn’t appreciate’ (line 5), ‘didn’t like’ (line 10), ‘didn’t mean I didn’t love her’ (line 8). To counter any negative statements about her parents she used emotion words and attributes for the positive feelings, such as ‘adored’ (line 6) about her father, and included past with the present to re-instate the importance of her mother - ‘she still is like one of my closest friends’ (line 10).

#### 7.3.4. The use of metaphors and similes

The use of metaphors in the trauma narratives was rather limited. In the following some examples of the metaphors and similes that were used are given. These examples represent most of the metaphors and similes in the trauma narratives.

The following metaphor is from Fiona’s narrative. Her story was about the birth of her son 18 years ago:

‘your body is just (.) it’s just open season to anybody medical really’  
(Fiona, lines 23-24)

Fiona’s use of metaphors was centred around her body, and given that her story was about giving birth this use of metaphors is perhaps not surprising. A large part of her account was about how she felt that the doctors and nurses saw her only as a body to be ‘poked and prodded about’ (line 84). The use of ‘open season’ signifies this. ‘Open season to anybody medical’ denotes how ‘anybody medical’ had the right to her body. Using ‘your body’ instead of ‘my body’ enabled her to construct herself as being detached from the statement, and by doing so she was able to construct a statement which generalised how being in hospital can make ‘your body’ – not you, me or I – ‘open season’.

Alice also made use of a generalising statement to say something about herself:

'I was past my sell by date so you know (.) he went to live with her'  
(Alice, line 143)

Alice's metaphor referred to age. Her husband left her for a younger girl, and this statement was said to her grandchildren when she was asked why she and granddad did not live together. Referring to herself as 'past my sell by date' indicates an orientation to something that has gone old, a product that you can purchase – instead of indicating for instance, someone not worth loving.

Both Fiona's and Alice's metaphors drew on the body, and although Jennifer also used a metaphor to refer to herself, she made use of a metaphor that said something about what she was through her *actions*, as opposed to both Fiona and Alice whose metaphors were about themselves as passive *actors* having had something done *to* them:

'So it was like (.) oh no (.) you know (.) black sheep of the family now'  
(Jennifer, line 188-189)

Being the 'black sheep of the family', she constructed herself as having done something wrong in the eyes of her family. She constructed her narrative throughout to indicate that a failed marriage was a failure on her part – hence being a black sheep.

It is perhaps interesting that even though the use of metaphors was very limited, we found that the use of them in the middle and old age group referred to themselves. The use of metaphors in the young age group were in these cases non-existent, but this simile comes from Christopher, and here he used it to refer to his parents in connection with his brother's brain tumour:

'cause they're like a rock' (Christopher, line 23)

Where the other age groups used the metaphors to overtly say something about themselves, Christopher's use is indirect. By referring to his parents as being 'like a

rock', he constructed himself as in need of 'a rock'. In his narrative he has constructed his parents as struggling to cope with his brother's illness, and as a consequence he 'didn't know how to cope' (line 28).

### 7.3.5. Rhythm

Most crisis or trauma narratives follow a chronological timeline (Toolan, 2001), and that was also the case for the majority of the narratives here. The rhythm in the narratives followed other event descriptions with use of 'and then'. Interestingly, within this chronology, the participants also constructed how they thought and felt at the time of the incident, and now, at the time of the interview. This orientation to talk about both emotion and thoughts intermixed with physical events is interesting for how emotions are perceived. When telling of the event, most people orientated to a generic narrative form, which was largely chronological. They would tell of the action (which typically involved someone other than themselves), and then they would talk about what they claimed to have thought - which descriptively *also* indicated how they felt. Their thoughts were constructed in a way that indicated emotion, thus interrelating thought and emotion. To ensure the understanding of the listener, generalising terms such as 'you know' were used thereby constructing the statements as universally understood or experienced. In the following, examples of how the chronological narrative was constructed will be given.

#### 7.3.5.1. *The use of 'and then I' to construct the chronological narrative*

The chronology was typically constructed by the use of 'and then I' or 'and then (action)'. There are many incidents where the participants jumped back and forth in time, but this was typically with the narratives describing events that took place over a longer time frame. There were two types of 'unexpectedly' references in the narratives. At some level all the events were unexpected, as the participant could not have known they would happen, how they would happen etc. But in the events where the time frame turned out to be long, as in divorce, illness, moving country, the narratives were slightly differently constructed, perhaps because the time frame itself did not allow for a minute-to-minute account of what happened as compared to shorter events such as the baby stopping breathing, or the father forcefully entering the house. These were all relatively short enclosed events, and although the reflections and effects of the events

may have had a longer time span than the actual event, it may be narratively easier to construct a compact narrative of a short time event.

Serena was the participant whose narrative was perhaps the most ‘cinematic’ structured narrative of the set. Her account was constructed to be an almost ‘minute-to-minute’ account of what happened, including her father’s thoughts in lines 26-27, (or rather, *her* perception of what her father thought), as exemplified in the following extract. Serena’s story was about how her father returned home after a year. She gave no explanation as to why he left, but she clearly stated that she did not expect to see him. Extract 7.3.9.P45 follows after Serena has talked about how her father had entered the house and ‘she went upstairs and hid’ (line 7) and ‘called the police’ (line 8).

**Extract 7.3.9.P45 Serena**

21 Hmm I went through the garage and went in front of the  
 22 house and stood in front of the house and just watched him emptying out  
 23 downstairs (.) hmm and then (.) I think when the neighbours came out and  
 24 asked me if I was ok (.) and I said yeah (.) and then I just stood watching  
 25 him empty out the house (.) hmm and then I think I went to the garage  
 26 and then he saw me by the garage and hmm (.) hmm and then I think he  
 27 thought I was hiding his things (.) but he didn’t know where (.) so he  
 28 came after me and I was screaming and another neighbour came out  
 29 to stay with me (.) hmm (.) hmm she took me away from the house (.) took  
 30 me into her house and she gave me like some food and stuff

The narrative chronology was given by the use of ‘then this happened, and then that happened’, and generally the level of detail of the actions that were taken both by her and her father was very high. This extract also shows how she used the narrative description of what happened in part to construct possible explanations for what happened and why her father did as he did by stating what she thinks he thought (lines 26-27). By allocating reason to his behaviour, she constructed herself as taking a positive attitude to the whole event, laughing at herself, and constructed a convincing argument in which she presented herself as taking the constructed ‘bad’ situation lightly. (For further discussion see also Chapter 8).

Where Serena’s account was focussing mostly on the actions that took place, another way of constructing the chronology is by accounting not only for what happened, but



also for what was said. The re-telling of direct speech works like the use of ‘I’ in that it gives the impression of having been there (Harré, 1999). It is, of course, not necessarily what was truly said, but a re-construction of something that might have been said.

Being a recount of a memory there are few incidences where we can indeed corroborate the truth (Harré, 1999). The following extract shows how actions and direct speech are interwoven to give the account chronology and make the impact greater.

**Extract 7.3.10.P25 Alice**

49 they got the keys for this other property and he’d come in er (.) er (.) at  
 50 lunch time and er (.) he said well (.) we’ve got the keys to the (.) the place  
 51 we were looking at in (name of village) he says I’ll take some of my  
 52 clothes over now (.) and he took his clothes out of his cupboard and  
 53 put them in the back of the car and took them back to her

This extract is taken from Alice’s account of when her husband left her for another woman. By using direct speech (lines 50-52) for what *he* said, she constructed him as the sort of person who would just turn up, take his clothes and move out, without further thoughts as to how this might affect her. The use of direct speech indicated a rhetorical use of ‘being there’. It made a strong statement in constructing that this was really what happened and what was said (Potter, 1996).

*7.3.5.2. The use of ‘and’ to signify actions, thoughts and emotions*

Although the construction of something that was said, thought, felt, or that happened can only ever be a construction and not an absolute truth, ‘and’ was often used to begin constructions of the relationship between actions, thoughts and feelings. Weaving into the chronological narrative of what happened *to* her, Fiona used ‘and’ to describe the relationship between an external action from another actor and what she thought. This extract is taken from a part in the narrative in which Fiona is at the hospital (to give birth), her husband, who is in the army, has left for work.

**Extract 7.3.11.P12 Fiona**

50 So he went (.) he went off because he was going off to (name of place) on  
 51 exercise (.) and I just thought that (.) you know (.) I’m here on my own (.)  
 52 totally.

Fiona constructed a scenario where her husband's action of leaving her leads her to think 'I'm here on my own' (line 51). By combining external actions with her thoughts she constructed a sense of factuality – it became believable that she did think that she was on her own, because her husband was not there at the hospital with her.

The 'and' also denotes the beginning of a description of feelings. In the following extract the chronology of what was felt was constructed by 'first I felt this, and then I felt that':

**Extract 7.3.12.P45 Serena**

53 and I was really (.) really surprised (.) hmm I hadn't seen him in a year  
 54 and I was just absolutely astonished and then after being astonished I  
 55 felt really (.) really (.) really scared.

In this extract we can see the constructed relationship between cognitive appraisal and emotion in the narrative. In line 53 Serena first talked about how surprised she was and then goes on to explain why – 'I hadn't seen him in a year' (line 53). She then changed from using 'surprised' in line 53 to the slightly different, but related 'astonished' in line 54. Her construction of the chronology is interesting as she constructed her emotion 'I felt really (.) really (.) really scared' (lines 54-55) as not just chronologically happening 'after being astonished' (line 53) but as a result of being 'surprised' and 'astonished'. There are two points to be made here; firstly, that in the later reflection of events, emotion was constructed as having a reason, and secondly, that the reason was appraised before the feeling of emotion occurs.

*7.3.5.3. The use of repetitions to strengthen an emotional statement*

The use of repetition made the statement even stronger, and it is noteworthy that the repetitions were predominantly to do with already emotionally laden statements, as can be seen in the following passages:

'I felt really (.) really (.) really scared' (Serena, lines 54-55)

'It (.) it was just such a really (.) really (.) scary thought' (Fiona, line 53)

'he just kept trying and trying and trying' (Kelly, line 13)

'I were very shocked (.) absolutely shocked' (Penelope, line 60)

It seems the participants used the repetitions because the words available were not strong enough to denote the emotional extent of what was experienced. However, these statements can also be seen as 'extreme case formulations (Pomerantz, 1986 in Potter & Wetherell, 1987), which "take[s] whatever evaluative dimension is being adopted to its extreme limits" (Potter & Wetherell, 1987:47), thereby making the statement 'I was scared' rhetorically persuasive and more powerful by adding 'really' as in 'I was really, really scared'. This statement grows in power with further additions of 'really' as the previous statement is rhetorically weaker than 'I was really, really, really scared'.

### 7.3.6. Traumatic short events and traumatic life stories

The trauma narratives can be divided into events that are short and enclosed, and events that are more like life stories. In the life stories, the participant took as the point of departure the event they found emotionally significant, but their narrative then turned to other issues. To some extent, most of the trauma narratives also told of other important issues, but this was more in the form of reflecting upon what the event meant then and now. The divorce stories seemed to be a mixture of the two. They had the same enclosedness as the short event stories, but their reflection upon the event and the long time frame was more like the life stories. Two from the young group made use of the life story format, Stephanie and Martin. They both talked about their parents' divorce, and were the only two young people talking about a parental divorce. The reflection was typical for divorce stories, which have often been found to focus on some form of re-interpretation upon ones life (Riessman, 1998), and it is interesting that a divorce of *parents* bring forth the same type of reflection. As this was not a point of investigation for this thesis, it will not be discussed further, but from an emotion research point of view, it is important to note that life-alterations such as parental divorce can bring forward some emotional issues, which the child has to reflect upon. They do not simply take it as a single event in their life, but seem to undergo the same fundamental questioning about general life issues that adults do when they themselves go through a divorce.

The ‘life stories’, however did draw on many more issues than the other stories, which, although relevant for the construction of psychological subject, or the life story itself, were not relevant per se for the initial emotionally significant event which began the narrative. Going on to the other issues in the narrative can come about in the form of reflection, as with the young girl Stephanie, or by changing subject as with Dorothy, as will be exemplified below.

In the following extract, Stephanie has just talked about what she remembered from saying goodbye to her father before leaving for another country, and how once she was there, she used to dream that this other country and England were right next to each other.

**Extract 7.3.13.P33 Stephanie**

136 So I don't think I was like (.) its not like I was crying in my  
 137 pillow or anything (.) I just (.) I just dealt with it but I didn't  
 138 really like it that much (.) hmm yeah (.) I started over eating (.)  
 139 chocolate bars (.) I think my (.) cause my moms always been a  
 140 full time mom herself (.) but there was only (.) I mean in  
 141 England like (.) I wasn't allowed to sweets until I was four  
 142 cause it would rot my teeth (laughs) and I think only like  
 143 vaguely desserty thing that would be in the house would be  
 144 chocolate biscuits

She then continued to talk about food, and how she became ‘baby-anorexic’ for three months (line 167) for another 80 lines. Her eating habits were relevant for her construction of psychological subject and of emotion. As she herself noted in the interview - ‘its like (.) it's the only thing we compensate for feeling sad (.) and then under-eating to get control back in your life’ (lines 180-181). As discussed before, Stephanie had a tendency to construct her narrative as neutral and to modify her emotion related statements (see extracts 7.3.8.P33 and 7.3.16.P33). The link between emotion and eating disorders has long been established, and there is some evidence for an association between dissociation and anorexia (e.g. Hinrichsen Wright, Waller & Meyer, 2003), but it is outside the scope of this thesis to further discuss the associations between emotion narratives, self-construction and eating disorders. Although Stephanie related her eating habits to the move, they were not directly relevant to the event of ‘moving’, and again, time span is hugely influential here. Her story took a form more

like that of a life story, and thus enabled her to reflect on many actions within a long time frame, in this case many years. Other, shorter event narratives specifically oriented to what happened in the short time span, hours or sometimes only minutes.

The following extract show how Dorothy took her point of departure in one thing, but then changed the subject slightly and even avoids ever answering the question:

**Extract 7.3.14.P18 Dorothy**

(I=Interviewer, P=Participant)

- 40 I: Can you tell me a bit more about when (.) when she sent  
 41 you away again (.) can you remember what was said (.) can you  
 42 remember sort of a bit more about the (.)  
 43 P: Yeah (.) my sister was all for me like (.) she worked in a cake  
 44 shop and she was a Manageress actually at 15 and she  
 45 didn't want me to go and she felt sorry (.) but me brother met  
 46 me at the station (.) and he said oh mum's like that (.) she never  
 47 wanted me to get married cos he went to school until he  
 48 was 20 and then he got married at 21 which didn't please  
 49 her and I used to go through all my leaves to him (.) and I  
 50 didn't have any contact with her again until after I was  
 51 married (.) but never close (.) but I always was with my brother (.)  
 52 til he moved to Scotland and it was submarines he was  
 53 working on there and I don't know what happened  
 54 somehow I wrote a letter and I sent one as I thought and I  
 55 got it returned and I never found him again (.) I've always  
 56 wanted to but never did (.) I suppose I didn't dig deep enough  
 57 did I

She did not answer the question apart from a quick mentioning of her sister not wanting her to go, and her brother meeting her at the station, saying that 'mum's like that' (line 46). She then went on to talk about her brother instead. Like Stephanie's, Dorothy's narrative oriented to many issues which no doubt had importance to her and her construction of herself, her life, and ultimately her mother, but where the story was about her and her mother, she actually talked very little about her, and when directly asked, managed to redirect the conversation to other topics.

Interestingly, it was not just the old age group who made use of the 'life story' format. The two young people talking about their parents divorce (Stephanie and Martin) and

for Stephanie subsequent leaving the country, also used of this form. It was, however *all* of the old age group in this particular sample who used this format.

### 7.3.7. Interaction in the interviews

Although it was not initially the intention to investigate the interaction in the interviews with regards to analytical description, some interesting issues in the interviews arose. One issue was how there seemed to be different needs for prompts in the interview, and another one was how laughter was used as a rhetorical tool. Each will be discussed further below.

#### 7.3.7.1. Needs for prompts

The instructions given to the participants prior to the interview were to try to remember as many details as possible - and tell of these. But there was a difference within the set as to whether the participants would freely talk about their experience at length and in many details, or whether they needed a great deal of prompting from the interviewer. As mentioned earlier, some would 'change subject', but some would very shortly tell of the event and then stop and wait for the interviewer to probe further. Others did, however, talk at great length without any probing from the interviewer. Here, the feedback from the interviewer took the form of facial expressions and the occasional utterance of 'yeah' or 'mm', to ensure the conversation flow continued. For those not needing many prompts, the interview protocol (see Appendix 7) was roughly followed, whereas for the ones needing prompts additional questions (such as the following) regarding their experience had to be added in vivo:

'Can you tell me a bit more about when (.) when she sent you away again' (To Dorothy)

'Do you remember what you did (.) did you do anything (.) you know' (To Susan)

'When you first heard about their divorce (.) what (.) could you tell me a bit more about that' (To Martin)

Distributed across the age groups, the need for prompts can be seen in Table 7.3. The cut-off point for ‘some’ prompts versus ‘many’ prompts was how many more questions outside of the interview protocol were needed. In ‘some’ prompts, additional questions are below 10, and in ‘many’ prompts the additional questions are above 10.

**Table 7.3: The need for prompts compared between the age groups**

Age group	No Prompts	Some Prompts	Many Prompts
18-21 years old	1	3	1
35-50 years old	3	1	1
65+ years old	0	3	1

As can be seen from Table 7.3, the level of the need for prompts were distributed fairly equally across the age groups, with most needing some prompts. Age group 2 (35-50 years old) is the one group that has the least need for prompts, but there is nothing in the data that suggests any answers to why some need more prompts than others.

### 7.3.7.2. *The use of laughter*

Although laughter was not initially looked upon as doing something in particular in the narratives, it became clear that it was also used as a discursive tool almost as a repairing or modifying device, something that changes the value of a statement. Billig (2001) discusses laughter in relation to embarrassment and shame, and suggests that the difference between shame and embarrassment is humour, and that “What is shameful is not necessarily funny, but, it seems, what is embarrassing is potentially humorous” (2001:29). Especially interesting is his suggestion that wry humour can be used by embarrassed people to “wryly acknowledge their difficulties [rather] than try to disguise them” (2001: 31), and the importance of differences between laughing *at* and laughing *with* people. Billig suggests that learning the appropriate social behaviour (i.e. feeling embarrassment by breaking a social rule) is in childhood aided by the use of ridicule, teasing and laughter. Laughter can thus be used to turn away from the possibility of being laughed *at* towards the possibility of onlookers laughing *with* the embarrassed person. In the narratives this may happen as the narrator constructed a situation in which she ‘can laugh about it later’ (Billig, 2001). As will be discussed in Chapter 8, part 8.4, at the end of the interview when asked about her clearest image of

the event, she talked about standing on the road in view of the neighbours feeling embarrassed.

Laughter was, of course, also used to convey a positive attitude to something, or to construct a statement as being funny.

*Positive attitude to what has happened can be constructed through laughs:*

In the following extract from Serena, she had just talked about how her father was not meant to contact them without prior notice through a solicitor, so when he came to the house it was unexpected. She had constructed herself as being ‘really (.) really (.) really scared’ (lines 54-55), and had up until this point in the narrative constructed the situation as being ‘the scariest time I’ve ever had’ (line 42). In this extract, however, she laughed, which helped in her construction of having a positive attitude to what has happened:

**Extract 7.3.15.P45 Serena**

62 hmm then I also remember trying to be clever to shut the front door on him  
63 when he went out again (.) hmm and then I sat down and watched TV  
64 (laughs)

After having talked about how scared she was, she then constructed a scenario in which she ‘sat down and watched TV’ (line 63) followed by her laughing. This laugh served two purposes: it helped construct her as being able to take the event lightly, and the statement ‘and then I sat down and watched TV’ (line 63) made use of the same constructive tools discussed previously, in which the situation becomes neutralised. She thereby actively changed her construction from a ‘scary’ event, to a ‘neutral’ event by stating how she then did something as mundane as watching TV. The laugh helps this construction, as it can be seen as serving two purposes, firstly, her laughing at herself and the situation, thereby constructing her positive attitude, and secondly, her inviting the listener to also appreciate the laughable in the situation. The laughter here can, however, also be interpreted with reference to laughing about embarrassing episodes in which some social rule has been broken (Billig, 2001). Serena’s actions and reactions are perhaps not as could be expected (watching TV after such a scary moment), thereby breaking the social rules of ‘morally right behaviour’. Firstly she has constructed a narrative in which she strongly suggest that her father coming home was ‘scary’ - thus



her mundane activity of watching TV immediately after seems a slightly odd activity. Laughing about it now helps construct *herself* as knowing this, hence constructing whole event was funny.

*Positive attitude to what has happened can be constructed through references to being able to laugh about it:*

Where Serena was actually laughing, thereby making light of the situation she had just talked about, the reference to being able to laugh about it was also used. The following is taken from Dorothy, whose mother had repeatedly sent her away when she was a young girl:

'I mean I can laugh about it now' (Dorothy, line 128)

The laugh here was not actively inviting laughter in the present situation and did not work as constructing a 'funny' story. Used in this way, as a reference, it constructed the narrator as being positive towards what happened, and having moved on, but by not actually laughing, its function in linguistic terms only is not as strong as the actual laughing. *Saying* that one can laugh about it, is not the same as *actually* laughing about it. However, the actual laugh does not necessarily mean that the statement prior to it has been meant as funny as the following will show:

*Laughter as deflecting a negative statement*

In this extract, Stephanie is at the beginning of her narrative and has just told how she was moved to another country with her mother, away from her father, when she was 8 years old.

**Extract 7.3.16.P33 Stephanie**

5 I didn't really appreciate being taken away from it (.) and I (.)  
 6 I was just like a typical girl (.) I adored my dad so (.) I  
 7 resented her for taking me away from him (.) Hmm (.) but it  
 8 didn't (.) it didn't mean that I didn't love her or anything  
 9 though cause she was always like (.) she still is like one of  
 10 my closest friends really (.) I just didn't like that particular  
 11 action (laughs)

Although the laugh in line 11 was used similarly to the laugh in Serena's narrative, there was a difference between the valence of the statements made prior to the laugh. In Serena's case the prior statement referred to her *action* (watching TV), which is a neutral action, thereby making light of her reactions to the event/ enables her to flag up her potentially problematic behaviour herself. In Stephanie's case the prior statements referred to difficult issues: resenting her mother, being taken away from her everyday living, and how she did not like this at all. These negative statements did not refer to her actions, but to her thoughts and feelings. By laughing in the end, she took some of the force out of them, and made them appear a little less serious.

This way of using a laugh as deflecting the negative statement was also used by Alice. In this case it was a negative statement towards herself, and the laugh in line 57 worked as in Stephanie's narrative by making it a little less serious:

**Extract 7.3.17.P25 Alice**

54 Er (.) I mean he just treated it as if it was you know (.) it was  
 55 (.) it was nothing (.) and we've been together thirty years (.) I  
 56 couldn't have been all that bad or he'd have got rid of me  
 57 before that wouldn't he (laughs) no (.) it was strange and  
 58 she left her husband as well

The laugh here, however, was immediately followed by a verbal statement that 'it was strange' (line 57) as if to re-emphasise that although her ex-husband and his new partner might have been serious (as line 57 indicates), and it had nothing to do with her (line 56), they had in fact been together for a very long time, but he 'treated it as if it was nothing' (lines 54-55). The question in lines 56-57 is rhetorical, and this may also be what the laugh refers to, thus emphasising the rhetorical value. Regardless, through this construction she made it clear that she had indeed given the events some thought, and the whole narrative was constructed to show how she had been struggling, and still did struggle at present to understand why the marriage did not work, unless she had been 'all that bad' (line 56). The statement here was thus very strong against herself, and by laughing she could make it out to be more jokingly than seriously meant.

## 7.4. Chapter conclusions

This chapter discussed the narrative analysis with respect to the structure of the narratives. It was found that generally there are more similarities between the age groups than there are differences. The narratives were classified under themes – loss, trauma, other story or positive story first – and these themes were represented in all age groups. The trauma narratives were selected to form the basis of the narrative analysis, and these were found to follow a typical narrative structure. The analysis found that despite the negative valenced nature of the narratives, they were typically told in a neutral tone rather than positive or negative tone. This issue of neutrality was also found in how negative statements were sometimes modified and neutralised through use of laughter.

The progressive, regressive and stable narrative structure was used by all age groups, although the regressive narrative was only found in two participants, both from the 65+ year old age group. It must be noted, however, that this does not therefore mean that the young age groups in general does not make use of regressive narratives, they did not do so in this specific study.

The main difference found in how the narratives were constructed across the age groups was the old age group's extensive use of what can be classed as life stories. Here the story's point of departure was the emotional significant event they were asked to talk about, and which was classified under the themes. As the story progressed, however, it centred on other issues not directly relevant for the story itself. Some participants would talk at length about their life experiences in general, others would talk about their present loneliness. All participants from the old age group (65+ years old), none from the middle age group (35-50 years old), and two from the young age group (18-21 years old) made use of the life story format.

The next chapter forms part 2 of the narrative analysis. Here the analysis will focus in more detail on how emotion is constructed in the narratives. It will look in detail at the descriptive details and the discursive tools employed to construct emotion. The analysis will also focus how control of emotion and loss of control of emotion and situation takes a prominent place in the emotion narratives. Furthermore, the close relationship

between the construction of emotion and the construction of the psychological subject is analysed and discussed.

# Chapter 8: Narrative Analysis: the narrative construction of emotion and the psychological subject

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## 8.1. Chapter summary

This chapter analyses and discusses how emotion and the psychological subject are constructed in the narratives. The first part of the chapter shows how references to internal states in the form of perceptual, cognitive and emotional details were used in the construction of emotion in the narratives. A comparison between the age groups in the use of specific emotion words is presented, followed by analyses of how emotion is constructed through emotional control. The chapter then shows how embodiment and social emotions are constructed in the narratives. The chapter ends with analyses and discussions of how the construction of the psychological subject and the construction of emotion are closely inter-related.

## 8.2. Focalization and internal states

Within the narratives, references to internal states formed an important part of the construction of events. It was through these details the participants constructed how they felt, what they thought, and what they experienced. We can only learn of the internal states from the participants themselves, and by constructing their narratives with these details, combined with details of external actions, they give their narratives depth. Most of the trauma narratives were told from a narrative position called 'internal focalization' (Potter, 1996), which is when a narrator has access to one character's feelings and thoughts (in these narratives this is themselves) and other characters' feelings and thoughts are only accessible through inference. This construction may have the purpose of enabling the listener to feel empathy with the narrator's situation, and so accept their presentation of events (Bal, 1985 in Potter, 1996). The participants did, however, also make use of 'external focalization', in which the scenes of the event is described with no references to thoughts or feelings; and an omniscient point of view 'zero focalization' where the narrator has access to the thoughts and feelings of all the actors (Potter, 1996). These focalizations, and what they do in the construction of

emotion narratives, are discussed in relation to the construction of internal states below. The details deployed within the narratives can be categorised as perceptual details (visual, auditory and olfactory), other-directed details (s/he thought or felt), cognitive details (I thought, I remember), and emotional details (I felt). Each category will be discussed below:

### **8.2.1. Perceptual details:**

The inclusion of these details enables the narrator to construct the narrative in a way that allows the listener to gain enough information to understand their construction of the event. Perceptual details along with other details of internal states are important in forming the memory (e.g. Cyrowicz, 2000). Evidence from flash-back memories suggests that they contain more perceptual details than ordinary autobiographical memories (e.g. Hellowell & Brewin, 2004), and would thus be possible that the trauma narratives would contain an element of perceptual details.

#### *8.2.1.1. Visual details*

'the waves started getting bigger and bigger and crashing over us'  
(Vanessa, line 6)

'hmm so he lost all his (.) all of his hair on his head and he kind of looked as though (.) like his hair was sort of burnt (.) or really badly sun burnt and it went all brown and whatever' (Christopher, lines 50-53)

#### *8.2.1.2. Auditory details*

'hmm I can hear him saying he can't breathe (.) I remember saying yes you can (.) because you can talk (.) I can hear the sound of waves crashing and that's it.' (Vanessa, lines 37-39)

'Well I heard the door getting banged and then when I heard it give way (.) then I ran (.) but I thought the door would hold but it (.) it didn't (.) so then I ran.' (Serena, lines 69-70)

### 8.2.1.3. Olfactory details

'That's the worst (.) just (.) it's like the smell of hospitals as well (.) it really overwhelms me (.) I really don't like that.' (Christopher, lines 100-101)

The use of perceptual details make the narrative more 'vivid', not just for the sake of the listener, but also with regards to the narrators own later interpretation of events (Bauer et al., 2003). The perceptual details were not all used in the same way, however. The visual details were constructed as more objectively factual than the other perceptual details, with references to the objects and their actions only with no internal focalization. The auditory and olfactory details, although their function in providing detail was similar to that of the visual, also made use cognitive references and internal focalization. Note the difference between Vanessa's two statements 'the waves started getting bigger and bigger' (Vanessa, line 6) and 'I can hear him saying' (Vanessa, line 37). In the visual details she did not make use of 'I', thus we cannot infer what *she* thought or felt when the waves got bigger, instead she provided us with a broad categorization of the event – in this case the increasing size of the waves – which we can then infer with respect to ourselves. The change from external to internal focalization in this case helped her to construct a believable eye-witness report – first she reported what can be seen (line 6) and then she reported what she experienced – *she* heard the waves, *she* heard her father speaking.

The olfactory details in the case of Christopher, helped him to construct more than just a scenario to be evaluated by the listener. By linking the smell of hospitals to how he felt 'it really overwhelms me (.) I really don't like that' (lines 100-101) he made use of a general category - 'the hospital smell' - which it is implied that most people would experience negatively. Thus, whilst overtly describing how he feels, at the same time he made what he felt generally applicable.

Using these perceptual details is a way of constructing a vivid picture of what happened, thereby constructing the narrator as a reliable, authoritative witness whilst simultaneously allowing the listener to draw their own conclusions based on their own or generalised experiences.

### 8.2.2. Other-directed details

These next passages are examples of other-directed details, in which the narrator gave details about other actors. The use of other-directed details may serve a discursive purpose, in that the narrator can explain or excuse own behaviour and feelings by constructing *other* actors' thoughts and reasons (Potter, 1996).

'Hmm but as I say my parents were still upset (.) relieved (.) upset (.) whatever emotional' (Christopher, lines 62-63).

'cause I think he was really angry' (Serena, line 13)

'I also remember them coming in thinking well (.) maybe she needs (.) maybe she's not been to the toilet' (Fiona, lines 44-45)

The references to other-directed details are linked to focalization. In these examples the narrator's have taken different points of view, each constructing themselves through their descriptions of the thoughts or emotions of others. Through zero focalization, Christopher constructed a seemingly 'factual' statement about how his parents felt by using several discursive tools – 'but as I say' referred to the following statement having already been said before, and by repeating it, he makes it stronger (c.f. Chapter 7 on repetitions). The fact construction of this statement can be seen in how he then offers only vague details about how they felt – 'upset (.) relieved (.) upset (.) whatever emotional' (lines 62-63). Although explicit details are used to build up the witness category, detailed descriptions are more easily undermined (Potter, 1996), and thus using vagueness rather than explicitly stating how his parents felt, he countered the possibility that the listener would draw a different conclusion to himself about his parents' state of mind, or question his narrative position as being omnipotent.

Serena used the other-directed details slightly differently. Constructing her narrative through internal focalization, she had given a consistently explicit and detailed account of both her and her father's actions, as well as her own thoughts and feelings. This, however, was in the beginning of the narrative, and although she gave *her* thoughts, it was her thoughts in *present tense* about her father's emotion - 'cause I think he was



really angry' (line 13). Her construction here allowed her to firstly explain herself and her own actions, thoughts and feelings as she, the narrator, knew she would tell them. In the rest of the narrative she repeatedly constructed herself as being scared. She had given no explicit explanations for why she would be scared of her own father, although she had mentioned that he should go through a solicitor to before he turns up at the house, and that they did not get on before he left. By using internal focalization she did not claim to *know* that he was angry, but through her repeated constructions of herself as a witness, she encouraged the listener to draw the same conclusions as her (Potter, 1996). Furthermore, by constructing her father as being angry from the outset, she set a narrative context for his future actions within which her re-actions appeared reasonable (see further discussion in part 8.4.).

Fiona's use of other-directed details may also have the function of explaining her own thoughts and feelings. As will be discussed in detail later (part 8.3.), Fiona constructed herself not just as a witness, but also as a victim, who has had to suffer the doctors and nurses treating her like an object. In this passage she made use of 'zero focalization', which creates a different construction from that of Serena's – who inferred her father's emotion as anger, or Christopher, who vaguely suggested his parents' emotion but left the final evaluation of their feelings up to the listener. Fiona's representation of other actor's thoughts - 'I also remember them coming in thinking well (.) maybe she needs (.) maybe she's not been to the toilet' (lines 44-45) – was a means to construct her and her co-actors in their roles of power. By stating that the doctors and nurses were *thinking about her*, not *asking* her, whether she needed the toilet, she constructed a power relation that made way for a continuous construction of herself in which she was made helpless.

### 8.2.3. Using cognitive details to describe emotion

The use of cognitive details such as ‘I’ gives the narrative the quality of truth – *I* was there and this is what *I* thought, this is what *I* remember, and as such discursively constructs the narrative as having an autobiographical nature (e.g. Harré, 1999).

In the previous passages describing perceptual and other-directed details, the cognitive details were also present, thereby strengthening the construction of those statements as factual (e.g. Potter, 1996; Woffitt, 1992).

The cognitive details can also be used as fact construction, as exemplified by Jennifer in the extract below:

#### **Extract 8.2.1.P9 Jennifer**

4 I (.) I don't remember kind of days and days (.) I mean I know it was  
5 Christmas time (.) and I seem to think it was just before Christmas but  
6 sometimes I think no (.) it (.) it couldn't have been because that was too  
7 close to Christmas

Here Jennifer was constructing a vague statement in which she mixed what she knows ‘I mean I know it was Christmas time’ (lines 4-5) with what she thinks she remembers ‘I seem to think it was just before Christmas’ (line 5). Her vague statements of cognitive detail such as ‘I think’, ‘I know’ and ‘I don't remember’ made it difficult to counter argue or undermine her statement (Billig, 1987).

The following passages exemplify how cognitive details can also be used to construct emotions. The relationship between cognition and emotion (as discussed in Chapter 2) can be exemplified in how the participants seem to rhetorically construct a relationship between emotion and cognition.

‘I remember it was panic (.) hmm’ (Vanessa, line 28)

‘I thought I was gonna die (.) I thought he was gonna kill me’ (Serena, line 87)

'And I just thought that (.) you know (.) I'm here on my own (.) totally'  
(Fiona, lines 51-52)

Vanessa constructed a direct link between cognition 'I remember' and emotion 'it was panic' (line 28). Serena and Fiona made a more subtle link with emotion, and instead of making use of emotion words (such as panic) by using internal focalization, they constructed a detailed description of their thoughts at that point which enabled the listener to infer what it must have felt like to be in that situation having those thoughts. Fiona's use of 'you know' strengthened the construction by making her thoughts in that situation commonly applicable. Serena had talked at length about her father's entry to the house, and although she has previously explicitly said how scared she was, with these strong statements she reiterates how she 'thought I was gonna die' and that her father 'was gonna kill' her (line 87). By using cognitive details such as 'I thought' Serena constructed a statement that was difficult to undermine. It could be suggested that she over-reacted to the situation, or that she was wrong to think these thoughts etc, but because she revealed something that only she can know, i.e. her own thoughts, we cannot say that this was not true. That she did not make use of explicit emotion words made her statement rhetorically stronger. By revealing her thoughts in detail she left the emotional evaluation up to the listener, who had of course already been primed through previous descriptions of how scared Serena felt. She had not said she was scared, but she had constructed a statement drawing on cultural understandings of what it means to think you are about to be killed, which would normatively result in being scared, thereby constructing her emotion as cognitively grounded (Edwards, 1999). A similar rhetorical construction is used by Fiona, who had already told of the circumstances of her giving birth; by allowing the listener insight into her thoughts, she constructed her emotion as cognitively grounded, where the assessment of how she thought lead to an understanding of her emotions. By not naming the emotion but instead constructing it by use of cognitive description, the assessment of the emotion experience was left open to interpretation by the listener, thereby lessening the risk of being challenged.

However, it is worth noting that although these statements points towards a discursive construction in which the narrator's stake is to be believable (Potter, 1996), it is also possible that the emotion words available cannot adequately describe what the participants wanted to reveal, perhaps there are not always emotion words to describe

the exact nature of what was experienced, as may also be the case with the use of repetitions, for instance. Instead, other details, such as the perceptual and cognitive, help the narrator explain what the experience was like, whilst at the same time drawing upon cultural and social expectations, norms and understandings. The limited use of direct emotional details does point towards other rhetorical descriptions of emotions being needed. The emotional details that were used will be discussed in the following.

#### 8.2.4. Emotional details

The following passages are examples of how emotions were also constructed through use of actual emotion words, such as ‘scared’ (Serena, line 3), or through emotional descriptions. These descriptions are different from the cognitive detailed descriptions discussed above because they are descriptions of emotional related mental states (Edwards, 1999), which, as with the cognitive details, are constructed so that the listener can infer the actual emotion.

‘I was a bit scared’ (Serena, line 3)

In this passage Serena stated directly what her emotion was – ‘scared’. Jennifer in the next passage used the same construction – ‘I was a bit’ – but her reference to emotion was different from that of Serena’s:

‘and er (.) actually I was a bit upset.’ (Jennifer, line 107)

Serena’s use of the words ‘a bit scared’ constructed an association with the emotion ‘fear’ (Collins, 2000). Jennifer’s use of ‘a bit upset’ is not associated with a particular emotion, but instead indicates a disturbance from a normal mental or emotional state (Collins, 2000). This difference is not just semantic, but signifies objects and actors as well. Being scared indicates an external object to be scared of, so Serena constructed her emotional state as being scared of – in this case - her father or his actions. ‘Upset’ can, according to Collins Dictionary and Thesaurus (2000), indicate disturbed mental, emotional or physical states, and thus refers back to the narrator’s internal state. The

object causing the upset is thus less obvious. A similar type of construction can also be found in Fiona's narrative:

'I just felt so low.' (Fiona, line 55)

Fiona's construction of emotion made use of reference to emotion by the use of 'I felt', but the inference of her emotion was left to the listener to interpret through associations of what the emotion associated with feeling low is. According to Collins Dictionary and Thesaurus (2000) there are many associations with the word low: "having little value or quality; insignificant; inferior; worthless; depressed; unhappy" (2000:705). As was the case with Jennifer, Fiona's 'low' referred back to herself, rather than to an external object.

Rarely in the narratives did we find references to emotional physiological states. Alice's description of her emotion through use of embodied emotion words such as 'crying' or 'numb' was an exception:

'And (.) and that (.) well it (.) well (.) it was awful (.) I was just (.) I was numb actually (.) I wasn't (.) I wasn't up to (.) you know (.) I didn't cry (.) I couldn't cry (.) I (.) I was too numb to cry' (Alice, lines 9-11)

These emotional details are discursive resources which enabled the narrators to characterise their mental states as emotional, and although some constructions more than others required the listener to infer what the narrator felt, they are less open to other interpretations than, for instance descriptions of emotion through cognitive or perceptual details. As with the other detailed descriptions, the emotional details add to the vividness of the narrative by allowing the listener direct access to the narrators own feelings (Bauer et al., 2003), both facilitating the narrator's construction of psychological subject and enabling validation of reasons for their own actions either prior to or after the emotional outlet.

The use of specific emotion words was found to be relatively limited. Table 8.1 below shows the age groups' mean use of emotion words.

**Table 8.1: Mean use of emotion words**

Age group	Emotion words
18-21 years old	3.4
35-50 years old	4.4
65+ years old	1.0

The table shows how age group 65+ years old made remarkably less use of emotion words compared to the other two groups. Although all groups made less use of emotion words than would have been expected (it being a narrative about an emotional event), the older group's lack of use of them may be explained by how we only in recent time have started to talk openly about our emotions, and thus they may not be in the habit of using emotion words, let alone talk about their feelings. That this is the case finds support overall in the data where most of the older people of their own account mentioned how they had not talked about their particular events, some not even with their spouses.

### **8.3. The construction of emotion and emotional control**

As discussed above, the use of emotion words such as anger, guilt and sadness, was very limited, and the participants made use of other more covertly discursive ways of constructing the emotion they experienced. That the participants were linguistically describing their emotions instead of using emotion words points towards a cultural orientation towards a narrative 'life script structure'. "Life scripts are generic [and] deals with cultural norms and expectations to the content and order of a typical life course" (Berntsen & Rubin, 2002:640). The deviation from the typical leads to a conflict (the traumatic event) and by detailed description of this deviation, the interviewee is assuming the interviewer's understanding, which can also be seen in the common use of 'you know', which not only normalizes the event (Schiffrin, 1987), but also seeks confirmation that the experienced emotion would be shared by the interviewer had she been in the same situation. This is interesting in the light of the assumed universality of emotions as being culturally shared experiences, and understood by shared knowledge (Harré, 2002). According to Riessman (1989),

“the meaning of events is not static, but is constantly reworked as new events and discontinuities must be integrated into the story of one’s life. Meaning is constructed in context, for the same event can take on different meanings depending on the conditions under which it is remembered” (1989:744).

This can be said to be true for the emotional meaning of events as well. As the event is reconstructed in the narrative, the emotional meaning is also reconstructed to fit into the context in which it is told, and to fit into the construction of life and identity of the narrator. That is not to say that emotion is ‘just’ a social construct to be used in narratives, but it is in part used to convey something about the person telling the story, the other people in the story, as explanations for why things happened, why actions were taken, something which has meaning for the narrator and the listener alike. In order for this to happen, there has to be something culturally and socially shared which can be drawn upon in the narrative.

Through working with the data, it was found that emotion was constructed as being in control of the narrator, or the narrator as being in control of emotion; also, the narrator can be constructed as having control over the situation, or not. Most participants constructed their narrative as being in control of the emotion, albeit not all the time, but not so much as being in control of the situation. This is an interesting distinction. One can be controlled, the other cannot. This may be linked to social norms and to the Cartesian folk notion of emotion as something irrational that should in most cases be controlled if one is to be perceived as a rational being. These issues of controlling/ not controlling the emotion and the situation will now be analyzed further in order to see exactly how the participants talk about this issue.

In the trauma narratives it was found that most of the participants recount the events in ways that indicate that although they may not have been in control of the situation, they actively tried to control the emotion. When and if they could not control their emotion, their accounts take on an explanatory note in which they position themselves as rational beings, succumbed to an uncontrollable situation.

### 8.3.1. Losing control, but controlling emotion.

The following passages are examples of how the participants actively sought to construct themselves with regards to being able to control the emotion even though they were not in control of the situation, or in a position where they could control other actor's actions. There are several ways this was done. The first examples show the construction of how the participants actively tried not to dwell on the situation:

'and you just try to er (.) not burden yourself with anything that could upset you (.) you know' (Alice, line 175-76)

'I remember trying not to think about it really cause like it was (.) it was too emotional to think about so I was just trying to like block it out'  
(Stephanie, lines 134-36)

Alice and Stephanie both constructed their emotional control as a 'mental effort' to control their actions, thereby making a distinction between emotion as either "*controllable action or passive reaction*" (Edwards, 1999:282, italics in original). Their emotions were controllable, but only to the extent that they *tried* to control them, thereby discursively making room for occasions when they were not able to control them. That this attempt to control emotions may be something morally expected, can be seen in how Alice constructed her statement by using 'you' instead of 'I', thereby constructing what she did as something general, what 'you would do'.

The importance of having emotional control can be seen in the following passages from Serena, which shows how she tried to make light of it *after* the situation had occurred:

'then I calmed myself down' (Serena, lines 9-10)

'I called my friend (.) started laughing and I was like (.) you'll never guess what happened' (Serena, lines 30-31)



Serena had consistently referred to herself as being scared. Statements like these exemplify how she constructed control of her emotions as being a controllable action, in the sense that she chose to do so. She could have constructed a narrative in which she made no reference to calming herself down or trying to laugh about it, but in this constructed recollection she deliberately referred to doing so, thus making the issue of control relevant to her emotion talk. Stephanie showed a similar orientation to constructing herself as in control of her emotions after the event:

So I don't think I was like (.) its not like I was crying in my pillow or anything (.) I just (.) I just dealt with it but I didn't really like it that much  
(Stephanie, lines 169-170)

Stephanie's construction highlights a scenario in which she could have acted one way, but actively and consciously decided to act in another way – she could have 'cried in her pillow' (line 169), but instead she 'just dealt with it' (line 170). Here she actively constructed herself, as was the case with Serena, as the sort of person who would not unnecessarily linger on emotions – she might not have liked her situation that much, but she got on and got over it.

This orientation to emotion as controllable action can also be seen in the following example from Kelly:

'But I'm quite happy for him to be with somebody else' (Kelly, line 41)

Kelly's statement illustrates the control of emotion being constructed as something present. Talking about the divorce from her husband, her use of 'I am' signifies that she is, today, looking back at the event, in control of her emotions – she is 'quite happy for him to be with somebody else', i.e. she is not unhappy. Her use of present time as well as an emotion word strengthened this construction – the listener need not infer her feelings, she had stated how she felt.

Thus, emotion was constructed as something that can be controlled, a 'controllable action' rather than a 'passive reaction' (Edwards, 1999), but in most cases, only after the situation had occurred. That is to say, after the initial 'surprising element of the

situation'. This is noteworthy, as it seems that participants oriented themselves towards a dualism of emotions where they were seen as something to be controlled and rationalised. Emotions were accepted as being part of the experience, but not something to be dwelled on.

### 8.3.2. Losing control of situation and emotion

For the majority of the participants, then, the loss of control was confined only to parts of the experience. In most cases, the loss of control was short lived, and is in the reconstruction of the event immediately countered by explanations of the loss of control, by taking control, or by lessening the effect in the present interview situation. For others, the loss of control and being controlled by the emotion were still reflected in their present. In the following the two cases of Serena and Fiona will be discussed in detail with regards to how they constructed themselves in relation to losing control of situation and emotion. How a significant other's loss of control can also result in one's own loss of control is then exemplified by Christopher's and Vanessa's accounts.

Serena's story was about her father, who had left her mother, sister and her, a year and a half ago, and with whom they had had relatively little contact since. He turned unexpectedly up at the house, although he was meant to give prior notice through the solicitor, and forces his way in. Serena was home alone, and consistently constructed herself as being 'scared' (lines 3, 8, 16). From the very beginning of her narrative she mixed her being afraid with taking control and made light of the whole situation.

#### Extract 8.3.1.P45 Serena

1 Hmm I think it was when hmm my dad reappeared at home after a year  
2 hmm (.) I think cause he left us about a year and a half ago and I was at  
3 home by myself (.) I was a bit scared (.) hmm I think (.) I remember what  
4 happened (.) he like (.) I heard the key going and I thought it was my sister  
5 (.) opened the door and then had (.) I tried to close it again and he came  
6 through hmm I was really surprised and he just started lifting furniture  
7 downstairs (.) hmm I went upstairs and hid in the toilet cause I was really  
8 scared hmm (.) hmm I called the police and then (.) cause I had no credit  
9 on my phone and put my phone in my pocket and then I calmed myself  
10 down (.) hmm then I went downstairs and asked hmm what he was doing  
11 and he asked me for some of his stuff and I wouldn't tell him where it  
12 was and I hmm (.) cause I was hiding it in my cupboard cause it was like

13 computer stuff hmm (.) and he (.) I think he saw it but he didn't know it was  
 14 (.) that's what it was cause I think he was really angry (.) hmm and then he  
 15 went outside (.) I shut the front door cause he didn't have keys to get in (.)  
 16 I was really scared cause he (.) he banged the door down and then he  
 17 chased me into the back garden hmm (.) I was screaming (.) it was (.) I find  
 18 it really funny now (.) I was actually screaming but hmm (.) I called the  
 19 police again cause they hadn't turned up yet hmm and I think (.) I think  
 20 they'd do something about it now cause I was screaming down the  
 21 phone and then my dad went back inside (.) I didn't want to go in the  
 22 house again (.) hmm I went through the garage and went in front of the  
 23 house and stood in front of the house and just watched him emptying out  
 24 downstairs (.) hmm and then (.) I think when the neighbours came out and  
 25 asked me if I was ok (.) and I said yeah (.) and then I just stood watching  
 26 him empty out the house

Already in line 3 she had introduced herself as being scared. The initial loss of control of the situation as well as her emotions was instantly explained by the surprise (line 6) to find that it was not her sister outside the door as expected, but her father, whom she had not seen for more than a year (line 2). It is interesting to note how by constructing herself as 'surprised' she constructed the situation as being unexpected, and within this unexpected situation she could then construct her loss of control and her being afraid. This form of accounting may make it believable for her to be so afraid to see her father. She then emphasised how scared she was, not just by directly saying so in lines 7-8, but also through describing her own actions – hiding in the toilet (line 7). So far in a very short span (lines 1-8) she constructed a narrative that draws on all the typical elements of a horror story - being home alone, the villain unexpectedly enters, you run and hide. However, her reconstruction of events then detours from the fictional story line. She constructs herself as *not* being a helpless victim waiting to be saved by a hero, *she* helps herself, and *she* takes control back by calling the police (line 8). When she discovers that this was not an option, she constructed a scenario in which she 'calms herself down' (lines 9-10), and goes to confront her father (line 10). She thereby constructed herself as a strong person, who is not helpless and who does not rely on others for help, but instead tried to take control of the situation, herself and her emotions. Serena then constructed the situation to be continuously frightening through descriptions of her feelings - 'I was really scared' (line 16), and descriptions of her actions - 'I was screaming' (line 17, repeated in line 18 and 20). Her attempts at

regaining control, either by calling the police (line 8 and again in line 18-19) or trying to prevent her father's entry to the house (lines 5 and 15), or by confronting her father (line 10) had so far failed, and this was every time explained by her father's behaviour and anger. Her final rhetorical device in her construction of her resistance to allow the situation and her emotions take control from her, is in lines 17-18: 'I was screaming (.) it was (.) I find it really funny now (.) I was actually screaming'. 'I find it really funny now' was her present re-appraisal of the situation. Although she had spent all this effort in constructing herself as being scared and by explicit details of her every move, thought and feeling constructed that as a reasonable emotion to have given the situation and the behaviour of her father, she is now, today, looking back and seeing the funny side. This did two things: Firstly, it constructed her as a person who is usually rational, who would not normally be screaming. Secondly, within this normality she was able to construct herself as a person who does not bear grudges – her father put her through an awful situation, in which she truly did feel scared, but she constructed herself as a person who does not hold it against him, instead, she was almost saying that she might have over-reacted a bit.

Fiona on the other hand constructed her emotions as being ongoing, starting with the event then and still being present *now*. Her story was about her experiences as she gave birth to her first child. Although there were no complications with the actual birth, it was very delayed and had to be induced. Moreover, her husband was in the army and only had certain days in which he could be present and she thus felt added pressure to give birth, as seen in this extract:

**Extract 8.3.2.P12 Fiona**

66 But then I gain (.) I again then felt under pressure to be giving birth so  
67 before Saturday night because he had to go back Saturday night (.) that  
68 was the last thing (.) Saturday night

In this extract, Fiona discursively set the scene for what follows. The added pressure to give birth before her husband needs to go back became part of her explanation for why she felt the way she did once she finally did give birth:

**Extract 8.3.3.P12 Fiona**

111 Anyway my (.) my son was born and he came (.) he came out and they put  
 112 him on my stomach and he peed on me straight away (.) and all I wanted  
 113 them to do was to take him away because I just had had enough (.) I  
 114 didn't (.) you know (.) this was (.) all of a sudden this baby represented  
 115 everything that I'd been through in a hospital where (.) a whole week being  
 116 dehumanised I suppose (.) and they just laid him on the bed and and the  
 117 humiliation of having your legs put in stirrups and being stitched up by  
 118 another face (.) another somebody else that you don't know (inaudible) it  
 119 just and I think I I don't think I'll ever forget how traumatised I felt and  
 120 how distanced I then felt to this very much wanted child (.) you know (.) I'd  
 121 had I'd had a good pregnancy (.) I was so looking forward to becoming a  
 122 mum and you know

Where Serena's construction of herself, her actions, her feelings was about actively attempting to control the situation and her emotion, Fiona's account is an example of the contrasting '*passive reaction*' (Edwards, 1999). She constructed her emotions, thoughts and feelings as happening *to* her – she does not have a choice in how she feels. This is typical of the trauma stories told by people suffering from PTSD: Holmes, Grey & Young (2005) repeatedly found that their participants would talk about helplessness and abandonment. This is what Fiona did in her descriptions of the event and of how she had been 'dehumanised' (line 116) throughout her stay at hospital. Here she described how this baby represents all the bad things, while at the same time actively constructed herself as a victim, not as a bad person, as she had been looking forward to being a mum (lines 121-122) for 'this very much wanted child' (line 120). Her description of how she had felt pressured to give birth while her husband could be present (extract 8.3.2.P12), the 'dehumanization' and 'humiliation' of the whole giving birth (lines 116-117), constructed a detailed description in which her focal point as a narrator was internalised, giving access to details of what happened to her. In these ways she allowed the listener to draw their own conclusions of what emotions these events must have incurred, whilst simultaneously offering clear statements such as 'I don't think I'll ever forget how traumatised I felt' (line 119), using extreme case formulation to persuade the listener to evaluate her emotions as negative. She had lost control of both the situation and of herself as can be seen in lines 117-118 where she made use of 'your' and 'you' instead of 'my' and 'me', an indication of a detachment

or discursive distancing. The further use of ‘you know’ in lines 114, 120 and 122 made the explanation complete by orienting the interviewer towards a common understanding of the situation and thereby the emotions experienced.

The extract also shows how social relations, morals, psychological subject and emotion are interrelated. Fiona constructed her emotion once she had given birth to be negative – she ‘had had enough’ (line 113). Her construction of events *after* the birth was important in her construction of emotions. Her narrative up until the point of the birth had been constructed as one long negative experience. She presented herself as feeling like an object, powerless in front of the doctors and nurses (see also extract 8.3.4.P12 and discussions in Chapter 7, part 7.3.4. and part 8.2.2.), and now that she has given birth she did not want her son there, but wanted ‘them to take him away’ (line 113). Her description “counters – actually or potentially – a range of competing alternative descriptions” (Potter, 1996:106), such as her narrative *could have* described how happy she was, how it was all worth it, etc. This description of how she felt is used to rhetorically excuse and thereby strengthen her construction of herself as a victim. She constructed herself as not choosing to feel this way about him, it was the circumstances as she had described them, that *made* her feel this way. Her mentioning of how her son even peed on her (line 112) is an important part of this construction. It was said, not as a humorous statement, not even with a smile, and although the interviewer, at the time, smiled, it was immediately very clear that it was not to be taken as a funny thing, but instead as the last straw in a series of things that should have been happy, that she had been looking so much forward to. It is constructed as something that, 18½ years later, she still think of as traumatic (line 119 use of present tense). Thus, she constructed a scenario in which something that can be thought of as being culturally unacceptable – ‘all I wanted them to do was to take him away because I just had had enough’ (lines 112-113) – is, in Benson’s (2003) terminology, no longer ‘unthinkable’ and thereby made morally understandable by her previous and following construction of the event.

The following extract shows how Fiona constructed her one attempt to take control of the situation:

**Extract 8.3.4.P12 Fiona**

80 And on Friday it would be (.) by this time the (.) my (.) my son's hh (.)  
 81 heartbeat was starting to dip a bit and I was getting really concerned (.)  
 82 and on Friday because the consultant came round and by this time I'd (.)  
 83 I'd actually got a bit of courage to say (.) look (.) you know (.) I'm really fed  
 84 up with being poked and prodded about (.) because I was getting  
 85 (inaudible) so (.) and I basically said you know (.) if the baby's not born by  
 86 tomorrow I want to have a caesarean (.) you know (.) I really (.) because I  
 87 was just exhausted by this time (.) I was totally and utterly exhausted (.)  
 88 and er (.) and so they sort of (.) hmm (.) they were standing around (.)  
 89 twitter (.) twitter (.) twitter (.) you know (.) as they do (.) talking about you  
 90 (.) over you (.) at you but not to you (.) it was quite a horrific experience  
 91 actually and I just felt like (.) an object (.) an inanimate object

She was getting concerned for her child's well-being and was asking for a caesarean. She spoke up to the consultant, which took 'courage' (line 83), and explained this firstly by her concern for her child (lines 80-81), but also because she was 'fed up' (line 83) and 'exhausted' (line 87). But unlike the way Serena constructed herself in her narrative as someone who was constantly trying to regain control, Fiona followed her statement of control with another description of how she was made to feel 'like (.) an object (.) an inanimate object' (line 91), being 'talked about, over and at, but not to' (lines 89-90). Thus, her attempt at control failed, and she again constructed a narrative, of how she was *made* to feel by others – those in control, *them*, and thus why she ended up so traumatised, as a victim. She drew on cultural understandings of the power relation inherent in the doctor/patient relationship, and used that as an explanation for why she allowed this 'horrific experience' (line 90) to continue. She positioned herself as being in a situation she could not get out of (ultimately she needed the doctors to ensure her baby's health) but she paid for that by losing her own sense of self. This may be exemplified by her repeated use of 'you' instead of 'I': in her narrative there were 15 instances where she changed the verbs 'I' to 'you' or 'my' to 'yours'. Similarly, looking for confirmation and normalization in form of 'you know' was used 134 times. In comparison, Serena did not change verbs at all (other narratives were 1-6 times), and her use of 'you know' was 2 times (the mean from the other narratives was 29 times). Again, Fiona's narrative bears resemblance to the findings in PTSD narratives (Holmes et al., 2005) of helplessness and disassociation. As this next extract

shows, she ended her narrative by constructing herself as feeling guilty, again something that is common for PTSD stories:

**Extract 8.3.5.P12 Fiona**

211 I do sit and wonder (.) and my son has had lots of problems (inaudible)  
212 got some learning difficulties throughout his (.) his childhood (.) you  
213 know (.) his (.) his school has expelled him so I'm really (inaudible) you  
214 know (.) we tried to sort of go back and trace their (.) (inaudible) these  
215 things happened (.) but I kind of like (.) I just (.) I sometimes think you  
216 know (.) what if (.) you know (.) what if it had been a normal process like  
217 everybody else (inaudible) you know (.) I (.) I'd (.) I'd got people around me  
218 (inaudible) I hadn't felt the way that I did and (.) and it's one of those  
219 things that's taken me forever (.) you know (.) I (.) I (.) I think that to me  
220 having (.) I've done lots of things in my life and having children has been  
221 the most traumatic and the most responsible thing and the hardest thing  
222 and (.) and I had another child two years later as well (.) so er (.) it's (.)  
223 but I think it's been (.) a lot of my deepest emotion has been (involving my)  
224 children and my perceptions of myself and you know (.) I (.) I feel that I've  
225 failed and I think it's that (.) you know (.) and even now there's still that  
226 sort of guilt I suppose (.) thinking (inaudible) so (.) I'm sure it is (.) I'm sure  
227 it is

Fiona's use of the present tense indicated that her feelings of having 'failed' (lines 224-225) and 'guilt' (line 226) were still present today, and she does 'sit and wonder' (line 211) if her son's 'learning difficulties' (line 212) are the consequences (lines 211-213) of her having a bad experience giving birth, and wondered if things might have been different, 'if it had been a normal process like everybody else' (lines 216-217), or if she 'hadn't felt the way she did' (line 218).

Here it is important to note that these accounts are not taken to be 'factual' even though they are constructed and presented as such. According to Silverman (2001)

"Wittgenstein (1968) implies that we should not treat people's utterances as standing for their unmediated experiences" (2001:290), but as accounts situated in the interview situation. Both Serena and Fiona's accounts were constructed with respect to the situation being a research interview of emotions, and their construction of themselves and emotion within this situation must necessarily reflect this. Serena's account of her being 'really really scared' would possibly be constructed differently had she talked to



her friend, her mother or her sister, and her construction of such a strong intense emotion perhaps gives her account 'added value' for the sake of the interview. Likewise in the case of Fiona, whose account of trauma of giving birth may reflect that her son's problems are ongoing. Her sense-making of the event is thus situated in the present, whereas Serena's sense-making of her account is done.

Within this caveat, it is, however, interesting that both women in their construction of themselves and their emotions are using similar discursive tools and devices. Both women make use of explicit descriptions to explain why they felt the way they did, to construct themselves as what could be termed 'rational beings', and both women make use of present tense to orient the interviewer towards how they feel now. The differences in these two narratives are in how the situation is controlled then, and re-appraised now. Serena made light of the situation – it was scary then, but she is over it and can see the funny side of it now, whereas Fiona found it traumatising then and still does. In her narrative, what happened to her during that situation has had consequences for her and her relationship with her son to present day.

Loss of control of the situation can also be in the sense of 'losing one's rock'. In the narratives this is typically the case in parent/child relationships, where the child (however old) discovers that their parents can also be fragile and that they cannot always look to them as being strong. Christopher and Vanessa both experienced their parents' loss of control as can be seen in the following two extracts.

In this extract, Christopher is talking about his brother. He had been diagnosed with a brain tumour and had to undergo an operation.

**Extract 8.3.6.P44 Christopher**

(P=Participant, I=Interviewer)

- 20 P: Hmm it was nearly as distressing for me to see my parents in the state  
 21 they were (.) as to see (.) as to hear (.) myself from Lucas (.) hmm its not  
 22 often that I see my parents get upset (.) upset (inaudible) everyone else (.)  
 23 but it really gets to me when they do hmm cause they're like a rock if  
 24 you know what I mean (.)  
 25 I: Yeah  
 26 P: They're like (.) they've always been the strongest and they're always  
 27 there to comfort me so when they're upset I (.) I just didn't what to do (.)

28 I didn't know how to cope (.) I didn't know what I was supposed to be  
29 doing (.) its not like a normal situation (.) a very big one so hmm so it  
30 was quite upsetting and quite hard to get (.) quite hard to get to grips  
31 with

Here Christopher talked about the distress caused by his parents being upset (lines 20-23). He explained this by naming them as 'his rock' (line 23), constructing this statement as a generally understood term as well as seeking confirmation that it is usual (line 24). He reinforced this statement by further explaining how this meant that they were always strong and always there 'to comfort' (lines 26-27). Losing that, meant that he in turn did not know what to do, thereby leading to his loss of control (lines 27-29), which he found to be 'quite upsetting' (lines 30-31). Vanessa's experience of parental loss of control was slightly different, but the consequences were similar:

**Extract 8.3.7.P46 Vanessa**

9 All of a sudden he was panicking and saying I can't breathe (.) I can't  
10 breathe (.) hmm and drowning (.) so it was quite scary at the time I  
11 think (.) when its your dad and he's the one that's supposed to sort of  
12 help you in the situation (.) you know (.) my sister and I were there and  
13 my dad saying that I cant breathe (.) I cant breathe and panicking and  
14 sort of having to calm him (.) calm him down was a strange situation

Vanessa experienced her father losing control both mentally and physically in panicking and drowning. She constructed it as more scary than upsetting, but uses the same reasoning for her distress in that 'he's the one that's supposed to help' (lines 11-12), also making use of the seeking of general confirmation by use of 'you know' (line 12).

Both Christopher and Vanessa constructed the situation as being out of the ordinary (Christopher in line 29, and Vanessa in line 14). By doing this they emphasised that this was not how it is meant to be, i.e. parents should be in control of themselves, and the consequence of them losing control is feelings of distress.

The similarities in these narratives were in how important control was constructed to be. All participants experienced some form of loss of control of the situation, and this loss was related to the experienced emotion. The attempts to regain control of the

situation and of their emotion were important in all the stories and the difficulties they experienced was what led to the feelings of distress and guilt. Importantly for their perception and construction of themselves were how they sought to resolve the situation and regain control, as well as their re-appraisal of the event and their own thoughts and actions in the present. This importance of regaining control is perhaps something that can be explained by neo-liberalism. Neo-liberalism exists within what Foucault named ‘Governmentality’ a form of governing, not only by the political means, but also by social structures, which allows, or rather expects people to understand themselves as free and autonomous, and thus governs themselves through this freedom. Thus the neo-liberal subject existing within ‘Governmentality’ is no longer a ‘subject’ but an individual with a *duty* to be free and self-governing; ‘Governmentality’ “embraces the ways in which one might be urged and educated to bridle one’s own passions, to control one’s own instincts, to govern oneself” (Rose, 1999:3). The neo-liberal subject is thus not a fixed self, but an ever-changing “work in progress” (Francis, 2006:190), forever trying to adapt to the social and economic structures and circumstances, and importantly, is free to choose its own actions and thus responsible for its own successes and thereby also its failures (Walkerdine, 2003; 2004).

## 8.4. The construction of the psychological subject in emotion narratives

As previously discussed, the construction of the psychological subject often takes place within narrative descriptions of our past and present. Exemplifying the closeness between emotion and the psychological subject, we return to some extracts discussed in the very beginning of Chapter 7. The end of the narrative was often signified with evaluative statements, and the following three extracts show the complexity of emotions, and how emotions were often constructed jointly with the psychological subject:

### Extract 8.4.1.P12 Fiona

223 but I think it’s been (.) a lot of my deepest emotion has been (involving my)  
 224 children and my perceptions of myself and you know (.) I (.) I feel that I’ve  
 225 failed and I think it’s that (.) you know (.) and even now there’s still that  
 226 sort of guilt I suppose (.) thinking (inaudible) so (.) I’m sure it is (.) I’m sure

227 it is

In this extract, Fiona's emotion involved her children and her perception of herself (lines 223-224). She constructed herself as feeling guilty (line 226) because she felt that she had failed. This feeling of failure can only come about because she compared herself with others who felt differently than her (extract 8.3.5.P12, lines 216-218). Social comparison is said to be a universal social process such that "we have a need to evaluate ourselves in relation to the relevant characteristics of others" (Howitt, Billig, Cramer, Edwards, Kniveton, Potter & Radley, 1989). From early childhood social comparison is relevant for how we learn and develop (Durkin, 1995), and in our culture it is an ingrained part of being a social being (Riessman, 1993). Because of the social nature of emotions, we learn how and when to express the 'morally right' emotions (Zhu & Thagard, 2002), and they thus become almost inseparable from our perception of ourselves. In this extract, Fiona's joint orientation to her perception of herself and her emotions were seen in how she used 'you know' (lines 224, 225), and how she constructed her argument with 'I think' and 'I suppose', as if looking for confirmation. In lines 223-224 she made a direct link between emotion and the psychological subject – 'a lot of my deepest emotion has been (involving my) children and my perceptions of myself' - thereby suggesting that her perception of herself was directly involved in her deepest emotion. She made sense of herself through evaluation of her reactions in the past. As it is, because of her social comparisons, this evaluation was negative, thus resulting in feelings of guilt. Construction of oneself through feelings of guilt and failure when something has gone wrong may be in line with how the neo-liberal subject would see herself – if the underlying belief in our culture and social environment is that we are autonomous individuals, in charge of our own happiness, then failing to control her own emotions during giving birth and subsequently not being able to re-construct herself as a normative mother, she has failed as a neo-liberal subject (Walkerdine, 2004).

This next extract is from Alice's story. She had talked about how her husband left her for another woman, and she also constructed her self-evaluation in the light of what happened:

**Extract 8.4.2.P25 Alice**

41 after all these years (.) you know (.) how (.) you know (.) what went wrong  
42 (.) there must have been something wrong with me or he wouldn't have  
43 done it er (.) it was my sort of feeling you know (.) er (.) and you know (.)  
44 that's (.) I suppose is the biggest emotion that I've had

She tried to make sense of the event, but even when she was reconstructing it, and even if she had had ample opportunity throughout her narrative to construct him as the villain (because he left her after 30 years of marriage, Chapter 7, extract 7.3.17.P25, line 55, for their daughter's friend), she was constantly evaluating the event as if 'there must have been something wrong with her' (line 42). Like Fiona, Alice was actively seeking confirmation for how she felt, and how she had evaluated herself, by use of 'you know' (lines 41, 43). She could only find one answer to her rhetorical question – what went wrong (line 41), and that was that it must have been her (line 42). Similarly to Fiona, Alice was also explicitly linking emotion and the psychological subject, by suggesting that the biggest emotion she ever had (line 44) was how she felt that 'there must have been something wrong with me' (line 42), thereby constructing herself within her emotion of being a woman whose husband left her for a younger woman, and within the neo-liberal subject as this being her own failure. A more feminist reading of her construction of herself could however be that she perceived herself in the role as the traditional 'the perfect wife' – she even forgave him and would have taken him back, had he wanted to (see Chapter 7, part 7.3.3.2.). Crawford (2004) suggests that traditional gender roles in marriage are to some extent withheld through self-help book and relationship advice, which often lay the responsibility of making the marriage work with the woman and thus "play a role in justifying and preserving the existing social order" (2004:75). Tong (2007) makes the point that feminists today

"worry me when they insist that nowadays woman are free to be whomever they want to be and to do whatever they want to do. Women's only possible enemy is themselves, they imply. Forgetting how much their power is connected to their advantaged position, [they] fail to recognize the vulnerability and... victimization of disadvantaged women" (2007:37).

It can be argued that some of the women in these narratives fall into this category of disadvantaged women: Alice was a woman whose life was possibly centred around the

traditional family pattern, and just as a man in a traditional family role may ‘lose’ his role as the family provider upon retirement (e.g. Riesman et al., 1989) a woman in this traditional family equally ‘loses’ her role as a wife and mother upon divorce. If this is all that she has worked for - and if this is what she chooses in her ‘freedom to be what she wants to be’ (which implies that this should not ‘just’ be a wife), she fails by not gaining this, and thus fails on several levels.

Although the self-evaluations in these narratives were linked to among other things, social comparison, cultural conduct and morale, they need not be negative self-evaluations. Both Fiona and Alice struggled with themselves and with what they felt had happened *to* them, which had made them ultimately lose control of the situation, of their emotion, and thus of themselves. Dorothy’s self-evaluation on the other hand, was a positive one, as can be seen from this next extract:

**Extract 8.4.3.P18 Dorothy**

36 But I’ve never forgotten it (.) and I’ve never hated her for what she did (.)  
 37 like some people say to me (.) oh (.) I’d never want anything to do with her  
 38 doing that (.) giving you away (.) but no (.) it’s never (.) never made me  
 39 horrible towards her (.) no

Here, Dorothy made a very strong social comparison by giving voice to what other people have said to her (lines 37-38). By using ‘active voicing’ (Potter, 1997) from ‘some people’ (line 37) she managed to do several things within one remark: Firstly, she constructed a scenario in which other people, with no stake in the matter, socially and morally allowed her to not to have ‘anything to do with her’ (line 37). By introducing ‘*some people*’ she build an objective picture in which it was not just her, and one other person, but as Potter (1997) suggests, using active voicing in plural, “makes it easy to hear it as reporting a *general* experience of a *range* of people” (1997:161). Secondly, this corroborating statement worked to lessen the effect of using ‘hated’ (line 36), a very strong emotion word, by ‘*not* hating her for what she did’ (line 36) *even though* that would have been socially and morally acceptable under the circumstances. Furthermore, by stating that she has never forgotten it (line 36) she emphasised how important to her it was and still is, but constructed herself as an understanding and forgiving person, and her mother’s actions thus ‘never made me horrible towards her’ (lines 38-39), instead of someone who would then and now have

negative feelings towards her mother for ‘what she did’ (line 36). By countering what would have been an acceptable negative emotion to have, her self-evaluation need not be tainted by negative emotions such as guilt as in Fiona’s case, nor questioning what was wrong with her as in Alice’s case, but by constructing her feelings toward the event and her mother in a positive way, she presented herself as an altogether ‘good’ person.

We return now to the example of the young girl Serena. In her self-evaluation she constructed herself as also looking to cultural norms of behaviour, and by thinking that she had broken these norms, she constructed herself as experiencing embarrassment. This can be seen in the following extract from later in the interview where she has just been asked what her clearest image of the event was:

**Extract 8.4.4.P45 Serena**

93 Hmm I remember him hurling abuse at me in the back  
 94 garden and I remember standing outside the house (.) cause I  
 95 mean I live in a little close like a cul de sac (.) all the houses (.)  
 96 all the houses could (.) our house is in the centre (.) so everyone  
 97 could see me and I remember being really embarrassed (.) I  
 98 was so embarrassed (.) I also remember seeing my neighbour  
 99 who’s about two years older than me like the next day I was  
 100 oh thank god you weren’t there (.) and he was like (.) I mean he  
 101 was like yeah I was actually (.) and I was like (.) oh I’m really  
 102 embarrassed (laughs) (.) and he said no (.) I was really hmm  
 103 surprised at how the neighbours reacted (.) I thought they  
 104 would like look down on me and be like oh my god (.) what a  
 105 mad house (.) but no they were all like really nice and  
 106 sympathetic and stuff (.) yeah

Thus, after an account constructed towards being scared, her clearest image of the whole situation was one of being embarrassed. She oriented to the social aspect of living in the centre of a cul de sac (lines 95-96), where ‘everybody could see her’ (lines 96-97), and her embarrassment arose when she thought of what the neighbours must be thinking, that they ‘would look down on her’ (lines 103-104). This orientation to social norms influences the emotion she experienced. Where she initially felt scared, she was in her re-construction of events re-appraising the whole event in the light of being

embarrassed, so much so that she repeats being embarrassed (lines 97-98, 101-102), further emphasising that she was 'surprised when the neighbours did not look down on her' (lines 103-104). Her previous attempts to make light of the situation, and laugh at herself can therefore be seen as her coping strategy; by constructing herself as overreacting and laughing at herself, she avoids future or present embarrassment (Billig, 2001, see also Chapter 7, part 7.3.7.2.). In order for her to have felt embarrassed in the first place, she must have felt that she broke some social norms. Serena managed her descriptions of the event and of herself in such a way that constructed an account that explained and excused her behaviour then (Edwards, 1997), as well as constructing her present psychological subject as essentially rational.

## **8.5. Chapter conclusions**

This chapter has analysed and discussed in detail how emotion were constructed in the narrative by use of perceptual, other-directed, cognitive and emotional details, focal points and other discursive tools, such as rhetorical contrasts. It was found that the use of description of internal states and external actions were used to construct the account of the emotional event as factual, and that most often these description did not make use of explicit emotion words, but were rather constructed so that the listener could draw their own conclusions on what the experienced emotions would have been.

The analyses showed that within the construction of emotion the issue of controlling emotion and situation, or regaining control of emotion within an 'out-of-control' situation was important in the construction of emotion, and furthermore that this construction of emotion was closely linked to the construction of the psychological subject. It was suggested that the neo-liberal subject formed part of this construction of themselves, as the importance of controlling ones emotion and achieve a sense of normality or control of situations is part of the rational neo-liberal subject. Thus, constructing the narratives as witness statements not only served the purpose of constructing the stories as factual, it also aided in constructing the participants' emotions as being the 'morally right' emotions to have experienced in that given situation, and thereby positioned them as persons aware of the 'morally right emotions and actions. This understanding or construction of control of ones emotions thus



becomes essential in the formation of the psychological self within a culture still bound by the Cartesian dualisms of emotion and rationality.

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# Chapter 9: Narrative case studies

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## 9.1. Chapter summary

This chapter introduces the cases of Kathryn and Eliza. After an introduction to the embodied narrative, a detailed analysis of both Kathryn and Eliza will be conducted, drawing on the tools and findings from the previous chapters. Chapter 8 showed how control was found to be important in the construction of emotion, thus this chapter will look in detail at Kathryn and Eliza's construction hereof. The last part of the chapter will discuss similarities and differences between Kathryn and Eliza's narratives.

## 9.2. Introduction

The reason for choosing these two narratives as examples from the trauma narratives was to link the physiological, quantitative data with the narrative, qualitative data. In Chapter 5 the participants with the highest and lowest increase in SCL from baseline to interview were compared. Here the two participants represented in the trauma narratives with the highest and lowest increase in SCL from baseline to interview will be analysed and compared. Kathryn represents the one with the highest increase from baseline to interview, and is thus in the physiological sense the one with the highest emotional response; Eliza represents the one with the lowest increase and the lowest emotional response with respect to the physiology. Kathryn is from the middle age group, aged 35-50 years old, and Eliza is from the old age group, aged 65+ years old.

## 9.3. Case study 1: Kathryn

Kathryn's story was about her divorce from her husband. Her story can be described as having a typical narrative format, with a clear beginning, middle and end. She began her narrative with 'oh gosh (.) hmm' (line 1) and continued to orient towards the event she chose to talk about – 'hmm I suppose the most recent significant one is a divorce' (lines 3-4). Her ending of the narrative, as was the case in most of the other trauma narratives, was an evaluation of herself, but interestingly this was in the form of how she constructed herself with respect to her own emotionality being centred around her

children ‘that would possibly be the one thing that (.) I can honestly evoke that feeling of fear (.) the dread (.) for them not for me’ (lines 72-73).

Her narrative can be classified as being progressive, as can be seen in the following extract:

**Extract 9.3.1.P19 Kathryn**

13 and millennium Christmas (.) hmm he decided that he no longer  
 14 wanted to be married and be part of our family (.) and hmm (.) hmm its  
 15 different (.) I mean I can (.) four year (.) four and a half years on now I can  
 16 look back and see (.) well (.) actually it was probably a sensible decision  
 17 to make to leave

The progressive nature of her narrative can be seen in lines 15-17 where she reflected on the sensibility of her husband’s decision to leave. She had made a strong statement about her husband’s decision to leave by emphasising ‘millennium Christmas’ (line 13), not just any Christmas, and gives no other reason than ‘he decided he no longer wanted to be married and be part of our family’ (line 13-14). Considering how many other ways she could have said this, using negative words about the situation or him, this neutral tone (also found in other stories) in which she blamed him for the break up of the marriage, allowed her to construct herself as a non-vindictive divorcee. How she further constructed herself in relation to her emotion can be seen in the following extract where she talked about herself in relation to the divorce:

**Extract 9.3.2.P19 Kathryn**

20 I don’t blame him for leaving (.) I mean I validate my own decision as a  
 21 wife (.) I didn’t do all those things that made Daniel leave (.) you know I  
 22 (.) in (.) as far as the books went I was the perfect wife (.) you know I  
 23 ironed all his shirts (.) he never had to do a thing at home (.) I was always  
 24 you know looking nice when he came in and always welcomed him with a  
 25 kiss you know (.) usual sort of thing hmm and he still left (.) so it makes  
 26 you wonder (.) it certainly made me think (.) what’s wrong with me (.)  
 27 hmm but four and a half years obviously it softened that (.) hmm I cant  
 28 say it was very emotional for me personally (.) the emotions set round me  
 29 was for my children and the fear that (.) that (.) cause I didn’t earn any  
 30 money (.) I hadn’t worked for 10 or 11 years (.) we had a company (.) I  
 31 didn’t own my own house cause we sold the house to buy the company so

- 32 I (.) in effect you know I went into a blind panic (.) oh my god how am I  
 33 gonna feed my kids (.) you know what am I gonna do

Within this extract Kathryn constructed herself as ‘the perfect wife’ (lines 20-25), a construction that drew on aspects of wife/husband relationships, similar to Alice’s construction discussed in Chapter 7, part 7.3.2.2. Unlike Alice, however, who constructed herself as still being affected by being left despite being a good wife, Kathryn constructed herself as being over it now – ‘four and a half years obviously it softened that’ (line 27). Her use of ‘obviously’ indicated a discursive orientation to social norms – she constructed herself as being aware that one should not dwell too long on negative things – an orientation found in the other progressive divorces stories. It is worth noting that this was a repetition of a statement she had just made about it being ‘a sensible decision to make to leave’ (extract 9.3.1 lines 16-17), thereby further reinforcing her construction of herself as being over this

Her narrative can be categorised as a short event story, in that she talked about her divorce and the things that happened in relation to this with reference to a relatively short time span. What is interesting is how in her initial account of her story she talked about her divorce, and ended with an evaluation of herself with respect to her emotions. She constructed herself as not being emotionally affected for herself (lines 27-28), but that for her – ‘the emotions set around me was for my children’ (lines 28-29). She thereby constructed her emotion as being rational in that her fear for her children was due to financial reasons (lines 29-33). Constructing her emotions as being rationally grounded in financial shortcomings enabled her to construct herself as a sensible person and her emotions as understandable (Edwards, 1999). It further strengthened her previous statements about being a ‘perfect wife’ (line 22), since by constructing her *emotions* as rational (rather than irrational), and thereby *herself* as rational, she became a more believable character. This was an important construction of herself. Other divorcees constructed themselves as victims (e.g. Alice) or part-responsible (e.g. Jennifer), but here she had firstly said ‘I don’t blame him for leaving’ (line 20), which indicated that he may have had a good reason to do so; but this was immediately followed by a defence of herself - ‘I didn’t do all those things that made Daniel leave’ (line 21). These contradictory statements, however, were countered by her construction of herself as ‘a perfect wife’, which she thus *had* to make believable for her

construction to work. This construction also drew on the same principles of the neo-liberal subject and gender roles as Alice's construction, as discussed in Chapter 8, part 8.4, but where Alice drew the conclusion that she ultimately had failed, Kathryn manages her construction in a different way. She drew on the 'perfect wife' symbol suggested by Crawford (2004) to be the type of wife who, according to the "superficial" (2004:65) self-help books, has a 'perfect marriage' as they abandon control to the husband, such as for instance becoming financially dependent on the husband (lines 29-33), as well as 'ironing shirts and looking nice' (lines 23-24). As he still left she drew the same conclusion as Alice – it must have been her (line 26), but she fights back, becomes a true neo-liberal subject who takes responsibility for her own happiness (Walkerdine, 2003, 2004), and therefore does no longer dwell on this. Further to her construction within a 'traditional feminine discourse' as opposed to a feminist discourse, is her construction of her emotions. Her emotions was not for her – as a traditional good women would abandon her own needs (e.g. Tong, 2007) as unimportant. A good *mother* would however be allowed to, or indeed should be rightly so, concerned for her children's well being.

Kathryn's story then turned from the actual divorce to a related event. Her previous constructions of herself and her emotions as being rational aided in building a picture of herself as a certain kind of person – a believable, sensible, rational person. This following extract is from after a lengthy telling of what happened after the divorce. Things turned nasty, and her husband at one point beat her up. This happened in front of the children, two girls aged 8 and 10 at the time. It was the youngest girl who stopped the beating up. In this extract she talked about what happened later that evening.

**Extract 9.3.3.P19 Kathryn**

182 But what is quite distressing is that night when she's sat in the bath and  
 183 I'm bathing her and I'm touching her and bathing her to get the connection  
 184 back to her (.) she apologised (.) even to this day (.) her memory of that  
 185 is painful to me (.) not my memory of it (.) but hers and she'll say things  
 186 like I'm sorry mummy that I couldn't stop daddy hitting you (.) what a  
 187 thing to give to that child (.) hmm and that (.) that's an emotion that evokes  
 188 a response (.) one of pure hatred for him (.) not for what he did to me but  
 189 for that image that child has in her head (.) does that make sense (.)  
 190 (interviewer) Yeah (.) perfect sense (.)

191 Yeah (.) there you go

To say that you ‘hate’ someone, is quite a strong statement to give, and as can be seen in this extract made use of two forms of linguistic tools – empathic descriptions, and actively initiating confirmation in the form of a direct question. Where other narratives made use of generalising comments and normative forms such as ‘you know’, here Kathryn actively asked whether her statement has made sense (line 189), thereby seeking confirmation of the normativity and acceptability of her statement (lines 190 and 191). This, however, could not have been done without the emphatic description and the linguistic pointers of appointing blame for the ‘wrongness’ of what he did, thereby deserving being hated. She began this passage with ‘but what is quite distressing’ (line 182), a powerful description where ‘distress’ refers to some form of mental pain (Collins, 2000), then continued with a description of how by bathing her daughter she tried ‘to get the connection back to her’ (lines 183-184). In order for her to get the connection back, she must have lost it, and this implied that by hitting her, her husband caused this connection to break somehow. The use of present tense throughout, but especially in lines 185-186, and her statement ‘even to this day’ (line 184) indicated that this was still, 5 years on, something that she thought to be present in her child’s head, and she made this explicit by her statement ‘what a thing to give to that child’ (lines 186-87). The use of active voicing of her daughter’s statement (line 186) corroborated firstly that the daughter still thinks about it, and secondly, it made the statement discursively stronger (cf. Chapter 8, part 8.4.). Thus she warranted her ‘pure hatred’ for him, not because he beat her up, but because he did so in front of her children, ‘not for what he did to me, but for that image that child has in her head’ (lines 188-189). In this passage, she rhetorically constructed a socially acceptable explanation for why her ‘pure hatred’ should not make her a bad person, but a person with a moral right to show and have this emotion.

Her emotions were thus consistently constructed to be around her children – ‘her memory of that is painful to me (.) not my memory of it (.) but hers’ (lines 184-185) and ‘that’s an emotion that evokes a response (.) one of pure hatred for him (.) not for what he did to me but for that image that child has in her head’ (lines 187-189). In these ways, not only did Kathryn construct her emotions as rational and morally understandable by feeling the negative emotion *because* something bad was done to her children, she constructed herself as *not* being affected, thereby constructing emotion as

something controllable as opposed to a passive reaction (Edwards, 1999) and managed thereby to combine the traditional feminine role as a mother protecting her child with the neo-liberal subject whose responsibility it is to remain a rational being in control of their everyday passions and emotions (Rose, 1999).

The forgiving, reasonable non-emotional character that she has built up can further be seen in this extract where she talked about her feelings after her husband had hit her:

**Extract 9.3.4.P19 Kathryn**

120 'I can put rationale on why he did it (.) he was angry (.) it wasn't actually me  
121 he was angry at (.) it was the situation that was outside of me (.) but he  
122 had nowhere to go with his anger so he delivered it to me (.) and it was  
123 almost like his excuse'

Again she constructed herself as being understanding, both by her use of neutral tone and what she was actually saying, but also through use of 'zero focalization' in which she constructed herself as having access to her husband's feelings and thoughts - 'he was angry', not at her but at 'the situation that was outside of me' (lines 120-121).

Her consistent use of 'I' as well as the provision of details about other actors' feelings and thoughts constructed the factuality of her statements, but it is interesting how she did not speak of her emotions, how she felt then or now with regards to *herself*. By not doing so, she implicitly constructed emotion as something that *she* can control, but did not construct emotion as *generally* controllable, as for instance, her husband could not control his anger (line 122). Her construction of emotional control is interesting.

Firstly, because narratively she has constructed an account in which she can indeed control her emotions, when she in fact, based on the physiological feedback, she is the one whose emotional response as measured by SCL was the highest.

## 9.4. Case study 2: Eliza

Eliza's story was more of a life story than a short event story. She talked about how she and her family (husband and daughters) moved to Canada. Her story can also be categorised as having a typical narrative format with a beginning, middle and end. Her narrative began with 'well I guess maybe hmm' (line 1) and then oriented toward the event 'we the family immigrated to Canada one year' (lines 2-3). The middle of her story was short presentations of things that then happened, before the narrative ends with them returning to England. The ending was not, as most of the other trauma narratives, an evaluation of herself, but more of a 'that's it' – ending. However, through her ending she did actively construct herself as a certain 'kind of person', one who does not give up or give in to whatever lives throws at her, as can be seen in the following extract:

### Extract 9.4.1.P56 Eliza

164 and then the council gave us a house (.) so then we  
165 started again (.) pulled ourselves up by the bootlaces

After having constructed a narrative in which their move to Canada has been 'horrible' (line 109) they got on and 'pulled themselves up' (line 165). This construction of herself can be found throughout her narrative, which thus can be categorised as a progressive narrative. Even though her demeanour throughout the interview was positive in that she was laughing and smiling a lot, her narrative tone was not neutral as was the case with most of the other trauma narratives, but predominantly negative. Her narrative was filled with statements like 'it was dreadful (.) just dreadful' (line 18), 'this was a terrible place (.) just terrible' (line 31), and 'oh (.) that was horrendous as well' (line 70), 'I would hate it (.) hate it' (line 100). Her narrative was thus an interesting combination of presenting and constructing herself as a positive person, whilst not shying away from constructing her story through negative valenced statements. She laughed a lot throughout telling her story. Laughter was used in other narratives as a discursive tool to neutralise negative statements, or to construct a positive attitude to what happened, and this tendency was also found here, although to a much further extent; throughout her narrative she laughed 13 times, each time following a statement of something that had gone wrong. By *actually* laughing the construction of a positive attitude to the events was much stronger than, for instance



Dorothy's use of reference to laughter (see Chapter 7, part 7.3.7.2). The following are a few examples of when Eliza laughed:

'but it was (.) it didn't work out (laughs)' (line 7)

'everywhere was flooded (.) and when they dug down outside there was just no drains anyway (laughs) (.) and I'll tell you it wasn't funny then' (laughs) (lines 23-25)

'so it wasn't that we were going to escape anything at all (laughs) (line 125)

'(laughs) it was quite (.) it was horrible (laughs) (line 174)

Contrary to some laughs in the other narratives, e.g. Dorothy's ('I mean I can laugh about it now', Dorothy, line 128, Chapter 7, part 7.3.7.2), or Stephanie's ('I just didn't like that particular action (laughs)', Stephanie, extract 7.3.1.7.P33, lines 10-11, Chapter 7, part 7.3.7.2), which was not perceived by the researcher to be 'inviting laughs', Eliza's laughs were hearable as inviting the interviewer to join in, as she managed to construct her traumatic events as being funny. Somehow her use of negative tone, combined with her own laughter and the descriptions of her hardship constructed a narrative that, despite the seriousness of the situation *then*, it is *now* something to be laughed about. Billig's (2001) 'laugh about it later' concept, in which a narrator "transforms the unpleasure of the past into the pleasure of the present" (2001:38) and thus can be seen to be a coping mechanism to alleviate the painfulness of the memories. To illustrate the dialogue of laughter, this extract shows one of the interactions between the interviewer and Eliza. This passage is from when after less than a year in Canada, which had been described as containing a series of events that were 'horrendous' (line 69), here they have decided to come back to the UK:

**Extract 9.4.2.P56 Eliza**

(P=Participant, I=Interviewer)

132 P: So then we came back and we landed at Heathrow in a snowstorm (.)

133 hired a car and got a puncture up the motorway.

134 I: (Laughs).

135 P: (Laughs) (.) it didn't seem that anything was going to be going right

136 (laughs)

137 I: (Laughs)

138 Found a hotel eventually in Leicester (.) couldn't find the (.) it was just (.)

139 must have been a bad winter (.) the snow at that particular time

140 I: Yeah

141 But all the hotels were full with what we could afford (.) cause we

142 came back with pretty well nothing (.) and hmm found one eventually (.)

143 freezing cold (.) curtains all torn and everything else but least we had a

144 bed for the night

145 I: Yeah

146 Because it (.) so I guess we didn't really think anything out at all

147 (laughs)

The laughs here exemplify how Eliza would consistently lighten up what would otherwise have been a grim story. By laughing, she invited the listener to also laugh, thereby showing that she did not now feel that this is something that warrants sympathy, but a hardship that was now, years later, a funny story. How she constructed her positive attitude apart from laughter can be seen in lines 143-144 – ‘but at least we had a bed for the night’, thereby constructing herself as being able to find a positive amidst the negative. That this may not have been the way she felt *then* is clear through how she repeatedly mentioned how ‘horrible’ and ‘dreadful’ it was (twice on lines 18 and 33, once on lines 109 and 166) and how ‘I’d had enough’ (line 104), but her recall of it *today* was constructed as it not affecting her anymore, as can be seen in the following extract:

**Extract 9.4.3.P56 Eliza**

210 you know to me (.) like I said before (.) if it's finished (.)

211 it's finished (.) you get over it and you start again and

212 put it all behind you (.)

This extract exemplifies two important things about Eliza's construction of her emotional event. Firstly, her attitude to coping with life events – 'if it's finished (.) it's finished' (line 210). Secondly, she constructed herself as having control, but not just in a way that she *takes* control. She does not use 'I' but instead makes use of 'you', thereby constructing control as something that is just there to have. This is interesting as this indicates that an orientation to the neo-liberal subject is not just something to be found in the younger groups, but is reflected across the lifespan. She could have constructed the same statement by saying 'I got over it' but instead chose to make the statement more general by using 'you'. This is interesting as she consistently constructed her emotion through descriptive details more so than through use of specific emotion words. Although she had made use of emotionally valenced words such as horrible and dreadful, she did not follow these statements up with how that made her feel, rather by giving details of the actions, the scenes, or the consequences, she left the evaluation of the implications of these up to the listener as can be seen in the following extract:

**Extract 9.4.4.P56 Eliza**

17 Well we went farming to work on a farm anyway and we  
 18 got to this place and it was just dreadful (.) just dreadful (.)  
 19 hmm mid tears for days and day's sort of tears I'm sure (.)  
 20 eventually I thought well you know (.) we've got to start again  
 21 and the first (.) the worst piece I think was when I did the washing  
 22 and the washing (.) the washing machine was empty (.)  
 23 it all came back into the kitchen (.) everywhere was flooded (.)  
 24 and when they dug down outside there was just no drains anyway  
 25 (laughs) (.) and I'll tell you it wasn't funny then (laughs)

In this extract Eliza made use of cognitive details to describe her emotions. Rather than specifically stating how she felt, she stated what she thought by using active voicing – 'I thought well you know (.) we've got to start again' (line 20), thereby constructing factuality and informing the listener of her thoughts, leaving the interpretation up to the listener. Her present reflection on the event can be seen in her use of present tense 'I think' (line 21) followed by a description of actions of flooding. All the events she described are thus external events, things that happened *to* them, which caused the 'tears'. Her present tense evaluation of the situation was that 'it wasn't funny then'

(line 25), and as discussed previously, with the laughs indicates that the not being funny was *then* rather than *now*.

Eliza's reluctance to directly talk about how she felt can be seen in the following extract. She had talked about some of the events that happened in Canada, and the interviewer asked her to 'try and put words to what it felt like to be in that situation' (lines 88-90). Her answer was as follows:

**Extract 9.4.5.P56 Eliza**

93 Well I don't (.) I mean obviously we just (.) we didn't like it  
 94 and you just had to make the best of it and do what you could  
 95 which we did and then got out as soon as we could but I mean  
 96 you (.) you were just so busy trying to sort of keep your head  
 97 above water in those days as well (.) it was hmm well just don't  
 98 want it happen again (.) I would hate it (.) hate it (.)

In a roundabout way her answer indicated how she hated what happened. Although she did use the word 'hate' in line 98, she did so in connection with that she would not 'want it to happen again' (line 98). There is two interesting points to be made here: firstly, 'hate' is repeated and can be seen as an extreme case formulation and thereby emphasised (cf. Chapter 7, part 7.3.5.3.), secondly, Eliza did not say 'I *hated* it', and thus by not using past tense she did not directly refer to the actual past event, but rather to a possible, similar, future event. Her mild use of 'we didn't like it' (line 93) was the closest she comes to an indication of her feelings. This is very similar to Stephanie's construction of her emotion (Chapter 7, extract 7.3.8.P33, line 10) in which she carefully constructed negative statements by negating a positive word such as 'like'.

Eliza in this passage also detached herself from the emotion. Firstly she had two false starts, before she then constructs her answer through using 'we' instead of 'I' thereby including all the family in not liking the events, rather than this was how *she* felt. Secondly, she immediately switched verbs again to 'you' removing herself even further from the statement, which becomes a general 'that is what you do' – 'you just had to make the best of it and do what you could' (line 94), and 'you were just so busy trying to keep you head above water' (lines 96-97). This generalisation of how to cope is reflected throughout her narrative – 'pulled ourselves up by the bootlaces' (extract

9.4.1.P56, line 165); you get over it and you start again' (extract 9.4.3.P56, line 24) – and indicates a social awareness to how one *should* react. In doing so she implicitly constructed emotion as being something that can be controlled as well as externally caused. The events that happened could not be controlled, but their following actions could, and thus there was no room for emotionality, rather the situations had to be dealt with in a practical manner, such as removing themselves from the situation – 'and then got out as soon as we could' (line 95). Eliza also consistently throughout her narrative, and in this passage, talked about the event through what they as a family did - 'we did' (line 95), 'we've got to start again' (extract 9.4.4.P56, line 20), and how they as a family felt 'we didn't like it' (line 93), rather than stating how *she* felt, as well as constructing what they then did as according to what one *should do* (e.g. 'you get over it and you start again', extract 9.4.3.P56, line 211). Her construction of emotion as something controllable is not only in line with the neo-liberal subject, it is also interesting as she is the participant with the lowest increase in SCL from baseline to interview.

## 9.5. Similarities and differences in Kathryn and Eliza's narratives

Emotion is often constructed through discursive dualisms such as rational or irrational, active or passive, controlling or not, cognitively or emotionally grounded (Edwards, 1999). The construction of the event is not just a reminiscence of what happened, but is an active making sense of the past and the present and so is closely connected with the construction of the past and present psychological subject. The emotions become embodied social actions, which have to be explained, either by the event, or by one's own or another's actions.

Kathryn and Eliza's narratives share some similarities: they both constructed emotion as something that can be controlled, and their self-construction and evaluation was through descriptions of how they *acted* in response to a situation. Similar tendencies were apparent in many of the other participants' trauma narratives. There are, however, several differences between Kathryn and Eliza in how they construct their control of the emotion. For Kathryn the control was through not being affected for herself, but for what emotions her children may have experienced. Her detachment from emotion was

achieved through rationalising the emotions she did experience by constructing them as *morally right*, and thereby ensuring understanding for her feeling that way. Her construction of herself through her narrative was thus primarily about herself as a mother, putting her children first, and ‘hating’ someone (her husband) for not doing so (by hitting her in front of the children). Eliza on the other hand, although she also constructed herself as somewhat detached from emotions, did so by allocating emotion to *the family* as a unit, not her children specifically. Her control of emotion lay in *action* more so than *feeling*, as well as in constructing the *action* as being the *socially right* thing to do. For both then, their narratives were culture bound and normatively oriented towards what one should or should not do or feel.

Like Kathryn, Eliza also made use of the emotion word ‘hate’, but instead of the ‘hate’ being directed at someone as in Kathryn’s case, and drawing on that hate as a present feeling because of the event that happened, Eliza’s ‘hate’ was directed towards a potential situation, similar to the past event. Her use of the word ‘hate’ may thus be categorised as less intense or less negatively valenced as it was not directed towards someone else, nor towards an ‘actual’ event.

The main difference between the two was in how they constructed the relevance of the past events to how they constructed their emotions as being now. Kathryn, even though she insisted that her emotion was to do with her children, was nevertheless *still* influenced by past events, and her construction of herself and her emotion reflected this (‘but what is quite distressing’, extract 9.3.3.P19, line 182: ‘her memory of that is painful to me’, extract 9.3.3.P19, lines 184-185). Eliza, however, constructed herself as consistently disregarding her emotions then, by getting on, as well as constructing her emotions firstly as being then, of that time and over now; and secondly as being part of her family’s emotions (‘if it’s finished (.) it’s finished’, extract 9.4.3.P56, lines 210-211; ‘we didn’t like it’, extract 9.4.5.P56, line 93). Importantly though, her emotion was not, as Kathryn’s, centred around her children. Her emotions were caused by external events that happened to them as a family, not to *her* and not to her children.

Most interestingly however, was how Eliza’s control of emotion was not just signified by her verbal construction of events, but also by her low emotional physiological

response when talking about the event, as opposed to Kathryn whose control of emotion predominantly took a verbal form.

## 9.6. Chapter conclusions

This chapter has discussed and compared Kathryn and Eliza's narratives. Kathryn and Eliza represented each end of the physiological increase in mean SCL from baseline to interview, with Kathryn having the highest increase and Eliza the lowest. They also represented two different age groups, Kathryn belonging to age group 35-50 years old, and Eliza to age group 65+ years old. There were similarities between the structure of their narratives and the structure found in the other trauma narratives. The comparison between Kathryn and Eliza also exemplified some of the differences found between the age groups in the other trauma narratives, such as life stories versus short events. The construction of emotion in the case of Kathryn is different from Eliza's in how the past event is still affecting her today, whereas Eliza's construction allocate the emotion to then and thus no longer present. This significance of emotion in present time accords with their physiological responses too, and thus makes an interesting link with the quantitative findings thereby making a tentative finding; that the discursive construction of emotion in the narrative may be directly reflected in physiological response. Kathryn's narrative was centred around her children, and this was also found to be the case for most of the participants in age group 35-50 years old, who also had the overall highest increase in SCL in the interview. Kathryn's construction of herself as a wife was similar to other divorce stories also making use of a discourse largely influenced by a traditional feminine view of what a constitutes a 'good wife'. Eliza's infrequent use of emotion words was typical for her age group, whereas her construction of positive attitude and tendency to laugh was not typical, but may signify why her increase in SCL was markedly lower. Her construction of emotional control through 'just getting on with it' then, and her ability to laugh at what was constructed to be a hard situation to be in, may reflect someone who truly is no longer affected by it – both biologically and psychologically.

The next chapter will discuss the findings from both the quantitative and qualitative parts of the study in detail and in relation to empirical findings and emotion theories.

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# Chapter 10: General Discussion

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## 10.1. Chapter summary

This chapter discusses the findings from the qualitative discussion in relation to the quantitative findings, and with respect to the methodology. The findings show that there is indeed a change in emotion across the lifespan – and although there are many similarities in the feeling of emotion across the life span, there are also many differences. How issues such as control and the psychological subject influence the feeling of emotion, and the relationship between emotion and cognition are discussed with reference to the literature.

The first part of the chapter summarises and discusses the findings with respect to the hypotheses posed in Chapter 4, followed by a discussion of the relationship between the psychological, social and biological with regards to emotion. The chapter concludes with a reflection of how the present findings and methodology relates to empirical findings and emotion theories.

## 10.2. Summary of findings

Our working definition of emotions saw emotions as existing within a brain-body system, which is influenced by cultural and social norms. The term ‘emotion’ was used for the neurological or physical level, and was in this study measured as SCL, and ‘the feeling of emotion’ was used to signify the subjective report of what the participants’ stated their emotion to be either through rating or narrative.

As previously discussed there are both differences and similarities between the three groups in this study of emotion. Most similarities of emotion were found between age group 18-21 years old and age group 65+ years old.



Age group 65+ years old differed from the younger groups in:

- An overall lower SCL
- More positive ratings of neutral pictures
- Higher rating of arousal of neutral and negative pictures
- Lower ratings of being affected now (after the interview)
- More use of life stories
- Less use of emotion words (such as anger, guilt, fear, sadness etc.)

Age group 35-50 years old differed from the old and the young age groups in:

- Higher rating of being affected now (after the interview)
- Higher rating of feeling negative now (after the interview)
- Less need for prompts during the telling of the event
- More use of emotion words in narratives
- Biggest emotion reaction (increase from SCL baseline to interview)
- Highest mean score on Positive Affect
- Lowest mean score on Negative Affect

Previous research in emotion has had a tendency not to define emotion, but instead draw on methodological concepts of how emotion can be researched. Also, little research had looked at emotion changes across the life span compared between different age groups within the same study. Our working definition of emotion allowed us to assess both the physiological aspect of the brain-body system by means of SCL, and the social and cultural influences both by comparing subjective answers to physiological data, but also by comparing it between the groups and drawing on their narratives surrounding an emotional event. Ageing and the psychological subject were seen to be influencing, and in turn be influenced by, emotion, and emotion and reason was believed to be closely interrelated. A series of hypotheses and questions were constructed to gain understanding of how emotion and the feeling of emotion may or may not change across the life span, and the answers to these will be presented below.

### 10.2.1. Changing emotion and feeling of emotion across the life span

The first hypothesis posed in Chapter 4 was that there is a difference between the age groups in how they would rate their valence and arousal when looking at emotionally valenced pictures – and that the old age group will rate the neutral pictures as more positive, and the negative pictures as less negative, and rate their arousal to both neutral and negative pictures as less than the younger groups.. As discussed in Chapter 6, age group 65+ years old rated the neutral pictures as more positive, but rated their arousal higher than the two other groups. A sub-hypothesis was posed stating that the SCL would correspond to these subjective ratings of arousal. It was found that the SCL measure did not correspond to the subjective rating of arousal in any of the groups with regards to the pictures as there was no statistically significant increase in SCL from baseline to picture viewing, but all groups rated their arousal as high. As discussed in Chapter 6 this may be more to do with the pictures themselves, which would be supported by Hempel et al.'s (2005) findings of higher SCL to positive pictures than both neutral and negative pictures.

Based on the Socioemotional Selectivity Theory (Carstensen et al., 1995; Gross et al., 1997; Mather & Carstensen, 2005), which proposes that the older age group has attenuated emotion, and that they have a tendency to be biased towards positive emotions, it was predicted that their ratings of the pictures would show less arousal overall, and higher valence for the neutral pictures, and lower valence for the negative pictures. The older group did show a tendency for a more positive rating of the neutral pictures, but not of the negative pictures. However, age group 65+ years old rated their arousal on the neutral pictures statistically significant higher than age group 35-50 years old and showed a similar tendency with age group 18-21 years old. If the subjective ratings are taken to 'measure' the feeling of emotion, it means that *generally* the old age group reports their feeling of emotion similar to that of the other age groups, not as the theory suggests, as more positive and attenuated. These findings taken together with the overall lower SCL in age group 65+ years old, thus may indicate that the older age group did not just base their rating on bodily feedback, or as an orientation to their actual physiological arousal (which was not increased when viewing the pictures), but was perhaps more influenced by the social context and one's knowledge of social and cultural norms and expectations to what one 'should' feel

when watching a certain type of pictures. This finding is interesting in the light of the controversial findings of Schachter & Singer's study from 1962, where it was the abnormal arousal, rather than less arousal, that was explained through cognitive appraisal of the context.

The second hypothesis posed in Chapter 4 was that there would be a difference between the age groups in the increase of SCL from baseline to emotional stimuli, in that the old age group will have less increase in the SCL from baseline to emotional stimuli, and a sub-hypothesis posed that the SCL measure is attenuated in age group 65+ years old. As discussed in Chapter 6, it was found in both the picture and interview condition that the skin conductance baseline level was statistically significantly lower in the older age group. This was not entirely un-expected as other studies have found this tendency. However, although the pattern of an increase in SCL from baseline to interview was similar in all age groups, age group 35-50 years old showed a tendency for a higher increase than both age group 18-21 years old and 65+ years old.

The differences in *emotion* across the life span were measured as differences in the changes of SCL. The similarity between the groups was undeniably present in that the pattern of an increase in SCL following emotional stimuli was present for all age-groups. Thus, although SCL was attenuated in the old age group, it still increased when exposed to emotional stimuli, in the form of talking about an emotional event. This is an interesting finding, as it may tell us something about emotion regulation. Previous studies have consistently found increased emotion regulation, or attenuation in older people (e.g. Charles et al., 2003), and the finding that the pattern of increased SCL is similar across the age groups may then points towards a mental regulation of emotion more so than attenuated emotion. Unless one can subjectively orient towards that one's skin conductance level is lower than it was years ago, and thereby one *feels* less affected, this cannot explain emotion regulation. It is of course quite possible that this may happen, just as older people are aware that their vision or hearing has changed. Taken together with the findings of the old age group's tendency to report being *more* affected by looking at the pictures, however, it points towards mental regulation as well as possibly using compensation strategies. As discussed in Chapter 3, it has been reported that older people cope consistently better with their ageing body and brain outside of the laboratory, in *real* situations. The picture series thus constituted a typical

laboratory situation in which it could be expected that the old age group would struggle comparably more than the younger groups, and as discussed in Chapter 6, this may have been shown in overcompensation, thereby rating their arousal high. The interview situation, although also a laboratory situation was not based on skills such as vision, or giving answers in form of ratings, but on talk. The participants were free to choose what they would talk about, they became the experts, and they had no time restrictions. The old age group may thereby have been able to draw upon similar coping strategies to those used in everyday situations. This aspect bears importance for the use of laboratory situation in research with older people. Although they may be able to draw upon some of the compensation strategies used in real life situations, the assessment of older peoples' emotion in a laboratory situation may slightly bias the results as their ageing body and brain are coping with an already unusual situation, and there may thus be variables affecting the result which the researcher are unaware of, and their coping strategies and mental regulation may not accurately reflect the 'real life' situation.

The further increase in the middle age group's SCL compared to both the young and the old group in the interview condition may be explained by social and material reasons. Age group 35-50 years old may have responsibilities related to work and family, which may have influenced them during the interview. It is also likely that the events they talked about had a greater influence and significance to them in the present day, for instance Fiona recounted how her son had present problems which she reported that she thought to be related to her experience of giving birth to him. The findings in the narratives showed that many in the middle group reported increased emotions where the event had had impact on their children's lives, more so than the impact it had had on themselves. That the emotion regarding their children often took the form of guilt, may points towards a social understanding of parenthood (e.g. Fiona, guilty for having 'failed' her son; Kelly guilty for having 'failed' her children; Susan for almost 'failing' her daughter), which can also be seen in that the younger age group also show orientation to this aspect, in the stories of how when the parents are not able to cope it leaves them feeling helpless (as in Christopher and Vanessa's cases). Compared to the middle age group whose stories thus may have relevance at present, the old and young age groups' stories, although undoubtedly significant for them, may not have been as emotionally involving at present. That this may be the case could be seen in the comparison between Kathryn and Eliza. Kathryn, who represented the highest increase

in SCL from baseline to interview and belonged to age group 35-50 years old, and as such represented 'highest emotion', constructed her narrative in ways which indicated the relevance of her emotions then to how she still felt now, through what she constructed as being her children's emotions and her constructed psychological subject. Given that one of the purposes of emotion is to preserve well-being (Damasio, 1999; LeDoux, 1998), it may be that having an invested interest in a significant other's feelings, such as one's children's feelings and well being, may not only be discursively reported, but also influence an increased emotion. This might then also explain the middle age group's subjective ratings of feeling more affected and negative following the interview. That Eliza, who represented the low increase in SCL from baseline to interview, and was from age group 65+ years old, constructed her narrative in such a way that indicated that the emotional event no longer represented a presently significant emotion, not only lend support to that view, but also, as discussed above, that emotions may be attenuated and more regulated in older people. That it was not *all* from the old age group that showed this tendency to the extent that Eliza showed it, may point towards a conscious effort to regulate own emotion.

Following the Socioemotional Selectivity Theory it was of interest to investigate whether age group 65+ years old would be biased towards constructing more positive narratives, but there was found no more positive stories in the old groups compared to the younger groups, nor did the older age group in general take a more positive outlook than the younger groups. The majority of participants chose to talk about a negative event, which may be explained by a social orientation to context (in this case a research interview). There may be a cultural expectation towards what to talk about in an interview about emotions, and it is thus possible that other cultures would have talked about different types of events, or more positive events. For instance, it is conceivable that American participants would have chosen to talk about positive events, event where they took an opportunity and succeeded, or other cultures would have talked about events in which their participation had caused something good to happen to someone else, etc. Another reason may be found in how Charles et al. (2003) found that negative events are more salient than positive events, and it may thus be that the participants chose the negative events, because they believed them to be easier to talk about in detail and length (given the rather unusual situation of talking about a personal event in a research situation). Those who began with a positive event were from all age

groups, and showed no gender differences. The memories ranged from when the participants were very young to very old, and thus did not fall in the ‘reminiscence bump’ (Neisser & Libby, 2003). Instead the participants talked about a range of events, which could be categorised into four themes, and indeed did seem to have been significant events for them. This may be explained by how narratives are a socially learned skill and how we learn to explore our emotions through emotion talk. Two differences between how the age groups constructed their narratives were found, however. As discussed in Chapter 7, the old age group consistently used life stories; and as discussed in Chapter 8 made less use of emotion words. These findings and their possible relationships will be discussed further in the following.

## **10.3. Relations between the biological, social and psychological**

Defining emotion, psychological subject and ageing as existing between and within the dualisms of mind-body and culture-nature, thus being a mixture of psychological, social and biological factors, allowed us to use a methodology that would enable us to assess how the different aspects change or stay stable across the life span. As discussed in Chapter 2, Griffiths (1997) argued that because of there being different emotion expressions, uses and understandings, we should re-categorise the term ‘emotion’. But, as this present study have shown, by doing so and conceptually separating what happens in an emotional event, we would miss the opportunity to look at the embodied person and how emotions are fully experienced. Instead, by using clear definitions of emotion and the feeling of emotion, we can appreciate the relationship between them, the differences and similarities, and thus make sense of data like this, and the causes and the consequences of a person’s emotions. In the following these relations will be discussed further by revisiting some of the previous discussions about emotions.

### **10.3.1. Embodied emotions**

As discussed in Chapters 1-4 emotions, narratives, ageing and psychological subject is already embodied and are as such influenced by and influencing the verbal constructions of the participants. Damasio’s (1999) theory of somatic markers and ‘body-loops’ may help explain some of the findings in this present study. Somatic

markers are, according to Damasio used to guide decision making. Thus, when rating a picture, or rating how one feels now compared to in the past, it is feasible that the somatic markers help make these decisions. It is also feasible that just like our bodies and cognitive abilities change as we get older, the somatic markers may also change. When rating the pictures, all participants showed discrepancy between their emotion (SCL), and their rating of arousal (reported feeling of emotion)<sup>16</sup>, but the older group had a tendency to report higher arousal on both neutral and negative pictures. This indicates that there is something which the older people do, or do not do, that is different from the other age groups. As discussed in Chapter 6 the compensation strategy is found in other aspects of ageing, and it may be that the somatic markers are no longer as well-functioning in the old group as in the younger, leading to an over-compensation in their ratings of arousal.

The lack of increase in SCL in the picture series compared to in the interview may be explained by the use of ‘body loops’ and ‘as if body loops’. As discussed in Chapter 2, ‘body loops’ are important to the experience of emotions and the feeling of emotion. Most participants said that they had been exposed to the pictures before, which, as discussed in Chapter 6, indicates a certain habituation to the pictures. It is, however, also possible that previous exposure to this *type* of stimuli may lead to the use of ‘as if body loops’ when exposed to them, which would explain the lack of SCL increase in *all* groups. That many participants showed overtly that they were emotionally aroused in the interview situation thus suggests that emotion here was experienced through the ‘body loop’, not the ‘as if body loop’, and thus supports Damasio’s suggestion that ‘body loops’ are somehow more real than ‘as-if-body-loops’. The fact that the interview situation drew on a ‘real experienced emotion’ as well, compared to a short term (two seconds) exposure to a picture stimulus, and thus a visually induced emotion, may also explain the differences in the emotion intensity. Further support for this is that most participants claimed that they had not talked about their respective experiences much, although they said they had thought about them. Thinking about them, though, is not enough to become habituated to them (e.g. Pennebaker, 1993), and the further active remembering and reconstruction of the memory may explain both the heightened SCL and the possible use of the ‘body loop’ mechanism.

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<sup>16</sup> Possible reasons for this were discussed in Chapter 6, and in part 10.2.1.

According to the Socioemotional Selectivity Theory, the older age group would rate the negative and neutral pictures as more positive than the other groups due to enhanced emotion regulation and tendency to focus on positive aspects, but this theory cannot explain the extent of these present findings. The evidence for enhanced emotion regulation with age is consistent, and the findings that older people have a generally lower SCL would support this view. It may well be that because the bodily feedback is decreased it may be easier to control and regulate the feeling of emotion. Only, the findings also showed that older people generally rated their arousal on par with or higher than the younger age groups, an indication that their perceived bodily feedback, although generally lower, are not reported to *feel* lower. This would indicate that the subjective, perceived arousal is no different across the ages, and thus *emotion* change, but not *the feeling of emotion*. However, the finding that the subjective ratings do not change in accordance with the level of the SCL, points towards that it is the increase from base-level to emotional response that is more important in bodily feedback than the base-level of SCL itself. As previously discussed, the compensations strategies that old people generally use in other areas, may well be used with regards to reporting and experiencing emotion too.

#### 10.3.1.1. *Emotion and memory*

This may point towards a cultural change in how emotions are talked about, and it explains why the old age group would make use of life stories instead of short event stories. If they as a generation did not learn how to talk about their emotions, and it was not the thing to talk about a traumatic event, it would explain why they consistently talked about other things that stemmed from that event, rather than concentrate on the event itself. With regards to using life stories instead of short event stories, the findings may indicate not so much a change in emotion itself, as using emotion as an aid in remembering. Recalling events by recalling their impact on other areas of one's life may mean that the ageing person is less likely to forget these events. Although they may not be able to remember as many perceptual and sensory details as their younger counterparts, this may have more to do with the length of time elapsed since the event took place, general memory function (e.g. incorporating similar events into one) than emotion itself has changed. We know that emotion influences memory, i.e. that our memory for items or events with an emotional tone attached to them are easier to remember, and because of emotions importance for construction of psychological



subject, it would make sense that memories that were of emotional importance to us, or which influenced our life through or because of the event, and therefore of importance to our sense of ourselves and construction of psychological subject, would be remembered for its emotional impact more so than for its actual details. Other possible reasons for the 65+ years old making use of life stories can be due to loneliness of the participants or simply interest from a younger person. The life stories may seem longer to talk about, and the participants could thus spend more time talking with someone else. Many talked at some point about being lonely, and the interview situation was such that there was no time limit on their talk. On the contrary, they were welcomed to talk as much as they liked. After the interview and picture viewing had finished, many older participants expressed how pleasant they had found it, as one participant put it, it had been interesting to have someone to talk to ‘other than the same old people’. That they thus redirected their initial event to other issues is perhaps not surprising. However, the focus on other aspects of their lives, the re-interpretation at things that has happened may be particular for that age group. As their life inevitably draws to a close, it does perhaps focus these issues more so than with the younger age groups, as argued for by the Socioemotional Selectivity Theory (e.g. Mather & Carstensen, 2005).

### 10.3.2. Social emotions

The social component of emotions was also assumed, and, as discussed in Chapter 2, emotional behaviour and emotion expression is closely related to social and cultural morale. We *learn* how to talk about emotion, and our emotional experience, our emotion and the feeling of emotion, is influenced by this learning. Thus, of particular interest was how the participants were ‘socially aware’ of their emotions and their reported feeling of emotion. As previously discussed, the verbal ratings of the pictures did not correspond to the physiological arousal, and as such it seemed as if there was an adherence to social and moral rules of rating the positive and negative pictures. The emotion narratives followed a typical narrative format and made use of rhetorical tools found in other types of narratives. As such, the narratives does not give us insight into “unique experiences [rather, they] simply reproduce predictable forms of how it is appropriate to account” (Silverman, 2001:93), thereby already conveying that talking about emotional experiences is social in nature. As the narrative was about a past event, we were looking at the reconstructed memory of the emotion, which not only included

the emotion of the embodied state (as could be seen in the increased SCL), but also allowed the narrator to re-construct themselves in relation to the emotion they experienced, both then and now. This reconstruction of emotion and psychological subject not only drew on social and cultural norms, but was also dominated through an orientation towards the interviewer, and the relationship between the two. The narratives were constructed within an interview situation, and there is little doubt that the narratives might have been told differently had it been to a close friend or relative, and not to a stranger doing research. What was interesting in the interview situation was how in the construction of the narrative, and of their emotional actions, the participants would occasionally seek confirmation from the interviewer by directly asking 'do you know what I mean', thereby rhetorically orienting themselves towards the researcher's understanding. Thus, the emotional narrative drew upon what the participant would perceive as culturally and/or socially known words, phrases, actions and behaviours to explain the feeling of emotion and its causes, both generally but also with regards to the present situation. It is, however, important to note that emotion exists without language. The importance of language for theories of self, identity, learning and development are somehow keeping the Cartesian divide between body and mind – and between psychological subject and emotion. But both psychological subject and emotion are relational and relative. We may be able to talk about both and through language we have an understanding of what it constitutes, but as research within social construction has consistently shown, these are not enclosed unchangeable entities. Thus, although language is important in order to communicate and construct, emotions and the psychological subject exist outside of the linguistic constructions as well. That language is not always adequate to explain how we feel, could be seen by how emotion was often constructed through other linguistic descriptions rather than emotion words.

This social element of emotions was also found in the way the participants constructed the part of their narrative which involved other people. The participants' talked about how they tried to make light of a situation in front of others; or characterised other people and their actions through their cognitive appraisal of the other's emotion. When emotions and actions took a form other than what the participant constructed as socially expected, their narrative took on a descriptive form in order to explain why the given emotion/action was socially acceptable. This is in line with suggestions from discursive

psychology (e.g. Edwards, 1997), which sees emotions as constructed to actively *do* something in the conversations, such as excuse and explain.

The use of laughter in the narrative also points to how emotions are also social in nature, and how using laughter, either actually laughing or referring to laughing, can change the valence of one's statements, and reiterate one's social competence. The use of laughter took two interesting forms. The positive form of laughing at what had happened helped construct the narrator as someone who is firstly positive in demeanour, and secondly does not dwell on negative events in a negative way. The use of laughter tells us something about the nature of emotions. With regards to the social aspect of emotions, although the narratives may not necessarily fall into the category of embarrassing episodes that Billig (2001) refers to in his discussion of laughter, the use of laughter in some of these narratives exemplifies the adherence to social rules such as deflecting negative statements towards close ones or minimising the effect of the previous statement, or simply just signifying the acceptance of the event being in the past and thus should not necessarily still have a major impact today. It further illustrates how even if a negative event is remembered and reconstructed, the negative emotion may not necessarily persist, or the person can actively do something to deflect – or control – the negative emotions that may occur. Although this may be by chance, as it was found in only one participant, it was interesting that Eliza, who laughed heartedly at her own story, indicated that it was highly emotional then, but not so now. Interestingly, Eliza also had the lowest SCL interview difference in the group (0.01, compared to the group mean of 0.39). This is by no means conclusive and would need to be further researched, but it is an interesting thought if it was truly right that laughter is the best medicine, and if we allow (or force) ourselves to laugh at past negative experiences, it may be that negative emotions can be changed to positive. This idea is not without grounding as much research has pointed towards that cognitive re-appraisal of emotion can change the experienced emotion (Lazarus, 1982, 1984), and that our moods affect our memory. The second use of laughter took the form of deflecting a negative statement, as the laughter was not an invitation to the listener to partake. It was used as a rhetorical tool to construct a negative statement as less negative. This also says something important about emotions: in the construction of the narrative the narrator paints a picture of all actors involved, this picture may be negative on purpose – constructing the villain, or implicit by the description of a

person's behaviour. Both have an effect on the narrative in the present situation that is not to do with the story told – namely that the narrator is *presently* talking *negatively* about someone who might still be significant to them (as Stephanie's mother), or someone who should not still be significant (as Alice's ex-husband). This is important. Stephanie's mother should be, regardless of what she has or has not done, still be significant (according to moral, social and cultural norms), and thus she should not talk about her in a too negative way. On the other hand, Alice's ex-husband has been ex for many years, and she should no longer be too affected of what happened (again according to moral, social and cultural norms). By talking as they do they implicitly disobey these norms, and show *inappropriate* emotion in the present. To reflect this and to show their social competence (Potter & Wetherell, 1987) in the adherence to social emotive rules, they laugh.

How the participants rated their emotion after the interview also signify the social construction of emotion. Although there without doubt was a bodily element in the emotion (as shown by the increased SCL), and even if the function of recalling the event reflected an everyday occurrence, the interview was a socially constructed situation. Through talking to the interviewer the participant actively constructed themselves in the narratives (see further discussions in the narrative chapters), and the rating of their feelings now and then can in that light not be an unbiased measure, but a continuation of that construction. If a participant has constructed a narrative in which s/he has painted a picture of forgiveness in the light of a cheating spouse, for instance, it would be a discrepancy to rate feeling negative now as high. Or if one has build a picture of oneself as a person who have dealt with life's cards, and the event, however sorrowful or negative have been dealt with and gotten over, s/he is not going to rate it as still being highly negative or feeling very affected by it.

In this light the predominantly neutral tone of the narratives can perhaps also be explained. The narrative description of the events that took place and the narrators own role in the event was closely related to the construction of psychological subject, and of relevance here is how the narrative structure of the story was also a reflection of the construction of psychological subject. The threefold classification scheme is perhaps difficult to consciously present and may be a reflection of how the narrators make sense of themselves in the telling of the story. This sense-making is naturally influenced by

the social context in which the storytelling takes place, i.e. the interview situation, but it is likely that the participants did not set out to ‘tell a story in which I aim to present myself as having moved on/not having moved on’, but instead was predominantly orienting towards a recount of ‘their’ emotional event – as this was what they were asked to do. Because of it being a research interview situation, it is therefore possible that the participants were consciously aware of the narrative tone they used. Presenting an account in a neutral tone may be easier and may be perceived as being more ‘scientifically correct’ as a form of eye-witness report of an incident. Following this, the little use of metaphors, images and symbols in the narratives may also be explained. The lack of use of these narrative tools is noteworthy, firstly, because they are part in other narratives (Crossley, 2000; Murray, 2003), and secondly, because discursive emotion research has found especially metaphors to be used in emotion talk (Edwards, 1997). The reason for the diminished use in these present narratives may again be due to the context in which the stories were told. Edwards’ (1997) study of emotion was based on couple therapy. There is a clear difference here in the purpose of the narrative. In couple therapy, the emotion talk has a purpose outside of a description of the emotional event. Although the narrators are also trying to make sense of the event, they are also likely here to be appointing blame and make excuses, more so than merely trying to explain. The purpose of the narratives here was to talk about an emotional event, and thus the narrator may have a different perspective on the event itself, and their main purpose is to construct a narrative that make perhaps more universal sense. Although they discursively construct themselves, their stake in the narrative is different in this situation, than had it been a more natural occurring setting, such as to a friend or a partner, or indeed had it been in front of or together with the other actors in the narrative. Their stake in the narrative thus shifts depending on whom the story is told to, and with this their construction of the event and their emotions may therefore also change.

That the stories were constructed for the situation and not well-rehearsed in advance can be seen in how most of the participants needed at least some prompts to elaborate their narratives further. Although they were initially asked to remember the event in detail, to talk of everything they remembered etc., they still needed to be asked probing questions, and a nod or a ‘mm’ was not always sufficient to encourage them to continue. Furthermore most of the participants reported to rarely talk about it, but to

think about it relatively often. It would need more research, but it is an interesting thought that perhaps the way we think about emotional experiences is not necessarily verbally. Our private remembering might not take the same narrative and linguistic form as our public remembering of emotional events, and although it is difficult to study empirically, there are some suggestions that not all experiences involving the feeling of emotion are verbally expressive (e.g. Burkitt, 1999).

### 10.3.3. Emotional control

As it has been suggested that older people have more emotional control (e.g. Gross et al., 1997), it was of interest to investigate how emotional control was constructed in the emotion narratives, and if it was constructed differently between the age groups. The narratives mainly drew on experiences of the ‘basic’ emotions, and were constructed by all age groups as being under the Cartesian divide – that emotions are irrational, and following a neo-liberal orientation to turn these ‘irrational emotions’ into controllable, rational entities. This was done by the participants’ active attempt to re-construct their actions and behaviour as rational by reasoning why they felt the way they did. As previously discussed (in chapters 1-4), the relationship between emotion and cognition, and emotion and reason has been widely discussed. In the simplest form of Cartesian dualism, emotion and reason are opposites; emotions are bodily founded, reason is in the mind. The relationship between reason and cognition can be said to be that reason is within cognition, and that in order to reason, one must be cognizing. The findings in this study are interpreted in the light that emotion and cognition are not opposed but interrelated, a relationship we found in the descriptions of emotion. Apart from direct use of emotion words (such as anger, hate, sadness), the construction of emotion was done through detailed descriptions (as discussed in Chapter 8). What was interesting here was how these descriptions were used to supplement each other. For instance in the extracts showing how the participants typically ended their narrative with an evaluation of themselves, we can see how descriptions make use of cognitive descriptions to *explain* or *state* their emotion, and how the participants would make the personal statements general by using ‘you know’. This tells us firstly, that emotion talk is very closely related to cognition, but also that it is culturally influenced. The participants expected their emotions to be understood through their descriptions, and by the construction of their narratives they would give, what they believed to be, a socially

acceptable reason for having had a particular emotion. The actual direct use of emotion words would only follow, or be directly followed by a descriptive explanation of how they came to feel this way. For instance, in Kathryn's narrative, she only uses the expression 'pure hatred' (extract 9.3.3.P19, line 188) *after* an explicit description of how her ex-husband hit her in front of the children, and how the youngest daughter still today apologises for not stopping it. By Kathryn's choice of words, as well as her use of her daughter's speech, she is actively constructing her narrative as an explanation for why she is allowed to feel hatred (Edwards, 1997). Thus, in the narratives the emotions are re-constructed, and reveals not only the moral values of the speaker (e.g. Goffman, 1959), but also how these values are influenced by cultural and social norms (e.g. Zhu & Thagard, 2002).

Emotions were also constructed as being closely linked to the participants' sense of psychological subject, and failure to control the emotion was often seen as a personal failure, and would often be constructed as experiencing emotions such as guilt or embarrassment. All age groups constructed their narratives in a way which showed how important being able to control emotion was to them. Loss of control over emotion, as well as situation, was explained with a clear adherence to social and cultural norms and values. Emotion was often constructed as something that 'happened' and which should subsequently be controlled.

There was nothing in the narratives that indicated that older people were generally better at controlling their emotions, or indeed has attenuated emotions, or in this case, feeling of emotion. Although they made more use of life stories than the other groups, the talk about emotions did not differ across the groups. That this was the case points towards how we culturally and socially learn to talk about our emotions, and by learning to use the narrative form to talk about emotions, we inadvertently make use of cultural and social learning of emotions themselves. The difference found in the narratives was more to do with how often emotion words were used, but this point more towards a cohort effect – it is only more recently that it has been culturally acceptable to talk about how one feels, indeed, the age difference was shown in how some of the older group members reported that they had not even talked to their spouses about their respective feelings on this particular event. That, however, does not

mean that the difference is due to ageing per se, but may simply show a shift in cultural acceptance of talking about emotions.

Previous studies of ageing and emotion has been focussed on how one *would* react in a situation now, or did react *recently*, or one's general outlook, and thus they are predominantly oriented towards emotion control and reminiscence. It is quite possible that in that context one would choose to remember positive memories, as well as construct oneself to being more in control of a recent emotion. The context of this study was to talk about a *significant* emotional event, not a recent or imagined event. There is thus a difference in the engagement of emotional control. As the event has already happened, in most cases years ago, the narratives can instead be dominated by construction of a reflexive psychological subject – that was me then, this is me now. Hereby the issue of control changes as the construction of psychological subject changes.

#### **10.3.4. The embodied, emotional and social psychological subject**

Talking openly about emotions is something that is fairly new (e.g. Butt, 1999), and 'The Stiff Upper-lip' has been replaced by a cultural acceptance, even expectation, of talking about one's emotions. Through language the emotional narrative is embedded in social, cultural and historical structures (Crossley, 2000), and through the telling of our story, we make sense of ourselves, our lives and life events (Benson, 2003, Cortazzi, 1993). Pennebaker (1993) have consistently shown that expressing our emotions through writing benefits our health, a notion that was first explored by Freud and his 'Talking Cure'. According to Damasio's theory of emotion (1994, 1999), emotions exists all the time, they guide our behaviour and our decision making. When emotions becomes conscious, the feeling of emotion, that is when we take notice of the emotion. Thus, the feeling of emotion is a mixture of what happens in the brain and the body, but also, and most importantly, how these signals are perceived by the person. This is where the social construction of emotion has significance, as we learn how to read the signals, how to name them, and how to react to them. If we react in other ways than what our social and cultural heritage has prescribed, it in itself creates an emotional reaction such as guilt, shame, or embarrassment (as for instance with Serena or Fiona) or conceivably pride and satisfaction (as for instance Dorothy). Our life history is based upon how we previously have reacted to events, how we have reflected



and do reflect upon these events bears importance for how we might perceive ourselves to react in the future. It can be argued that Benson's (2003) notion of the unthinkable, and his distinction between 'could not', and 'would not unless' is part of this reflection. How we perceive ourselves is closely bound by, not only what we could or would not do, but also what we should and should not do, and what we would like to be unthinkable. This in turn is embedded in our socio-cultural notions of what is morally right. Our emotions, how we actively talk about them in relation to ourselves and to others are part of this construction of ourselves.

As previously discussed, Griffiths' (1997) suggestion to re-categorise emotions according to 'affect program responses', higher cognitive states' and 'socially sustained pretenses', would keep the Cartesian divide of the human firmly in place. For instance, anger as a 'basic' emotion are seen as instant and short-lived (e.g. Damasio, 1999; Griffiths, 1997; LeDoux, 1998; Ortony & Clore, 1989), but it can take also be cognitive appraised (e.g. Damasio, 1999; Prinz, 2002), used linguistically to explain or excuse (e.g. Edwards, 197), and change from an emotion to the feeling of emotion. By seeing emotions as part of the embodied, social psychological subject, we can appreciate the multiple functions and layers of emotion, and as such investigate emotions, not through their discursive actions, behavioural actions, conscious or non-conscious actions, but encompass them and draw upon each factor. As the narrative is a reconstructed recount of an event that has happened, it is based on a mixture of cognitive and emotional appraisals, not only of what happened, but as the narrative analysis showed, the retelling of the event becomes interlinked with the construction of psychological subject and re-appraisal of the felt emotions. Burkitt's (1999) notion that emotions are "irreducible to social structures, discourses or the body" (1999:127), but should be seen in "the context of relations" (1999:127) is exemplified to some extent in all the narratives, but Serena's story captures perhaps the essence of just how complex emotions are. She draws on body, discourse, reasoning and social structures in her narrative. As already touched upon, she constantly constructs herself as attempting to regain control of the situation and of her emotions. In her narrative we find all the traditional behaviours of a 'basic fear reaction', the running away and the hiding. That it is not just this simple can be seen in how the other parts of the narrative are constructed. It is constructed to leave us in no doubt that she is frightened, but as well as showing the basic fight or flight behaviours, she is at the same time cognitively

appraising the situation, trying to solve the problem in what is culturally acceptable and right (calling the police). In this instance emotions can be seen as being embodied, in that she is screaming, as well as being in the mind in that she is cognitively appraising the situation. The cultural influence upon emotions can be seen in her present reappraisal of the situation. Here she draws upon the Cartesian dualism that emotions are irrational and something that should be controlled. She has constructed herself as being emotional (running away and screaming) and is now reappraising it as in that she might have overreacted a bit (by laughing at herself and her behaviour). Her present reflection upon this event changes the emotion from being rational (running away from danger) to being irrational (overreacting). This construction of rational/irrational reflects the reasoning that took place *after* the event. In this case, her construction renders the theoretical aspects of the James-Lange theory as irrelevant; regardless of whether she ran because she was afraid, or afraid because she ran, she construct herself as presently portraying her emotions to have been 'wrong'. It is instances like this, when we can see how our construction of emotion, and understanding of emotion draws on multiple forms, such as common-sense understanding of emotion, basic emotion reactions and behaviours, social and cultural norms and morales, that show that Griffiths' (1997) idea of separating the concepts of emotions may not help us in our quest to understand what emotions are.

Another example from this study that exemplifies how valuable it may be to consider evidence from outside of one's own field when assessing emotion is the case of Fiona. Fiona's story exemplifies the embodiment of emotions. Unlike some of the other trauma stories, Fiona's body proper is very much at the centre of attention – both from herself and from others. It is her body – or parts of it – that she constructs as receiving all the attention, which she constructs as being negative attention and she feels 'like an object' (Chapter 8, extract 8.3.4.P12, line 91). She constructs a narrative in which she experiences a split being made between herself and her body, a construction with a possible purpose of explaining why she still, 18 years on, feels distressed. The dualism between mind and body which we still draw upon today is perhaps easier to deal with when it is 'mind over matter', when we can argue, think, and rationalise, but when the body becomes the prominent in the two and takes over, we can no longer argue, think and rationalise. This makes sense both from a cultural and biological point of view. Culturally, we are taught 'mind over matter', we learn through various forms of

etiquette how to control our bodies (e.g. Burkitt, 1999), and by losing control over own body we also lose our social integrity. Fiona's constant re-appraisal of the situation is tainted by her emotional response, and has in turn lead to a re-appraisal of her responsibility of the situation, which has then led to her feelings of guilt (Chapter 8, extract 8.3.5.P12). It is through her present reflections of the event that she constructs her present feeling of guilt and responsibility for what later happened (the next 18 years of her son's life). She thus constructs herself as having ultimately failed (extract 8.3.5.P12, lines 224-225) because she did not feel right then (extract 8.3.5.P12, line 218). She explains it by how everybody else who did not feel like her has done fine, therefore, as she has not done fine, she must have felt the wrong way (extract 8.3.5.P12, lines 216-218). This social orientation to what other people felt (or rather what she believes other people felt) exemplifies Burkitt's (1999) notion of how "emotional life of individuals cannot in any way be separated from culture and learning" (1999:122). Her feelings of guilt for 'feeling wrong' cannot but be culturally learned as well as socially provoked by herself and her reflections on past events. Fiona's narrative can however, also be seen in the light of neuroscience. Her loss of control over the situation and her resentment of her body (as causing this) can from a discursive psychological point of view be discussed through how she constructs herself, her stake and interest in the narrative, extreme case formulations, discursively *doing* something with her narrative. However, by understanding of what happens in the brain during emotional trauma or events, her narrative may exemplify what may happen in an over-reaction of the brain-body system. In the brain "the amygdala has a greater influence on the cortex than the cortex has on the amygdala, allowing emotional arousal to dominate and control thinking" (LeDoux, 1998:303). Thus, Fiona's story can be evaluated not *just* as her *active* or deliberate construction of herself and the events that took place, but as a neuroscientific understandable reaction and self-understanding of impulses caused within her brain following the events.

This is not to say that the narratives and emotions are not constructed, but to exemplify that it may not be beneficial for the understanding of what emotions are to take one view-point or another, or, as Griffiths' (1997) suggests by re-categorising emotions so that they 'fit' in with the 'strongest' theoretical perspectives. Rather, by defining emotion and the feeling of emotion as taking place within the brain-body system, we may get a much fuller picture of what emotion experiences are. The narratives, for

instance, are not just factual statement of what happened, but reconstructions which, in the case of this study, served the purpose of not only telling of the emotional event, but explaining it, constructing themselves, blaming and excusing. The Damasian termed 'brain-body' system reacts, appraises and reappraises what is taking place, internally and externally, and in doing so experiences the feeling of emotion. By retelling the event, this feeling of emotion is either re-experienced or re-appraised again. In the case of Serena it was re-appraised, in that she thought she might have overreacted to the situation, but in Susan's case it was to some extent also re-experienced in that she talked about having a feeling of emotion in the actual interview situation, and thereby unexpectedly (to herself) recreated the emotion in her brain-body system.

## 10.4. Chapter conclusions

This chapter has presented a general discussion of the findings of both parts of the study, the interview and viewing of the pictures. It has shown how by using a mixed methods approach we may investigate emotions and the feelings of emotions both through the discursive construction in the social context, but also through some of the non-verbal aspects of emotion, such as emotion arousal, which may not always correspond to the verbal report. These discrepancies between the physiological and the verbal report allow us to gain an understanding of emotion which we would not have had, had we only looked at one aspect (either verbal or physiological). The discrepancies between verbal report and physiological arousal may be explained by Damasio's 'body loops' and 'as if body loops'. As previously discussed, it may be the 'as if body loops' that is being used when looking at a pictures series, and hence the emotional experience is not quite as strong as it would have been had it been the 'body loop' working. But these findings also potentially highlight a point which Damasio only lightly discussed. In his theory of emotion, he did not as such explain the consequences of social and cultural influences on emotion, but what we found here, may be just that: – that combined with the lesser feedback from the 'as if body loop', the social influence of what is 'socially right' to experience when looking at a certain type of picture, takes precedence, and thus the verbal report of arousal reflects the social and cultural aspect of emotion, more so than the bodily feedback.

The changes in emotion and the feeling of emotion is not just found in the old age group, but was found to be across the age groups. Many similarities were found between age group 18-21 years old and age group 65+ years old, such as a similar increase in SCL to emotional stimuli, with age group 35-50 years old showing both physiological differences (as higher increase in SCL to emotional stimuli) and discursive differences (as in more use of emotion words, less need for prompts). It thus seems like there is an increased emotionality in the middle age group, which may be explained by social, psychological and biological factors, but which in turn may also help explain previous research findings of increased emotion regulation and attenuated emotion in old people. If emotion is increased from young to middle age and then decreases again, combined with an overall less physiological arousal, it may well be easier to control and regulate emotion, or seem as if emotion is attenuated. These are tentative findings (as will be further discussed in Chapter 11) and will need more research.

Previous research findings of older people having increased positive emotions were supported to some extent. It was found that the old age group had a tendency to rate neutral pictures as more positive, but there was found no more positive emotions, positive tone, or positive self-construction in the old age group compared to the younger groups. It was suggested that the strategies that are already used by older people to compensate for lost or changed abilities may also be used with regards to their emotions.

The discursive construction of the narratives did differ across the age groups with the old age group making less use of specific emotion words, but this may be more to do with a change in language rather than a change due to ageing. It must however be said, that this change of how we talk about emotion, changes emotion in itself. Although emotions already exists in the neural brain-body system, it is through language that we learn about emotions - it is through descriptions and narratives that we learn what should make us angry, happy, sad, guilty, etc., and through this we learn the socially acceptable situations in which to have these emotions.

The next and final chapter will provide a summary of the thesis and suggest the practical and theoretic implications of this research. The chapter will then present future research and limitations to the study and conclusion of the thesis.

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# Chapter 11: Thesis Conclusions

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## 11.1. Chapter summary

This chapter summarises the findings of the present study in the light of the definition of emotion, and in the light of the methodologies chosen. Contributions to knowledge and further work to be undertaken are highlighted as are the limitations of the study, including the researchers' reflection upon the study. The last part of the chapter concludes the thesis.

## 11.2. Thesis summary

This thesis examined emotions across the life span. It reported on the concept of emotions and the difficulties of defining emotion. Through reviewing literature of philosophical and empirical approaches to the study of emotion, it discussed the possibility of a working definition of emotion, which could encompass the different aspects of what emotions are and how emotions are being researched. Using the term *emotion* to signify the physiological, not necessarily conscious aspect of emotion, and the *feeling of emotion* to signify the conscious and *reported* emotion, the emphasis on this study was to look at whether emotion and the feeling of emotion changes across the life span. For this purpose ageing studies and theories was also reviewed. Because the nature of emotions were believed to be multidimensional, a methodology was developed with the purpose of investigating three aspects of emotion – the physiological response as measured by SCL to an emotional stimulus, the subjective response to an emotional stimulus, and the narrative construction of emotion. The findings of the study showed that both emotion and the feeling of emotion *do* change across the life span. The physiological response, here measured as SCL was attenuated in the old age group, and thus supports previous findings of attenuated ANS in older people. The *emotion reaction*, (the physiological increase from baseline to an emotional stimulus) and *the feeling of emotion* do not necessarily change as a consequence of an attenuated SCL, and thus theories of emotion control and regulation in older people cannot be explained solely by attenuated emotion. The emotion reaction was increased in the middle age group compared to both the young and the old groups, and possible

reasons for this has been discussed as being both social, cultural, biological and psychological. The feeling of emotion does also change across the life span, although it did not seem to be dependant on the changes in emotion per se, rather it seemed more influenced by social cues and norms. This thesis' contribution to knowledge will be discussed below.

### 11.3. Contributions to knowledge

The findings of this study imply that the study of emotion benefits from taking a mixed methods approach in the experimental design. Whilst the emotion discussion has long been influenced by the relationship between emotion and cognition, recent findings have highlighted that there may possibly be other levels to emotions, which can explain this intricate relationship. Damasio's (1999) theory of emotions and feelings has been supported in the present study, as well as the importance of the embodiment of emotion. The design of this study aimed to investigate both the physiological aspect of emotion and the subjective aspect of the feeling of emotion. Measuring physiological responses such as SCL made it possible to make inferences about the emotion, both during a standardised emotion inducer such as the IAPS, and during an autobiographical recall. This combined with subjective ratings of emotion could tell us something about the difference between emotion and the feeling of emotion, other than Damasio's (1999) point that the feeling is the emotion made conscious. By using the narrative analysis, influenced by discourse analysis, we could infer something about this difference, namely that the feeling of emotion is not only an embodied subjective social construction, but is also strongly associated with the psychological subject, the social context, and the mores of a particular culture. It was found that while the emotion changes across the life span in the sense that the physiological response is attenuated, the emotion reaction - what *happens* when exposed to an emotional stimulus - remains similar, although with different intensity across the groups. In an attenuated emotion, such as lower SCL, Damasio's (1999) 'as if body loop' may explain why the subjective response to these changes does not also attenuate, however, it is also possible that subjective report on the emotional stimulus is more influenced by cultural and social learning, the social context, and ideas of psychological subject and morale, than corresponding to what happens in the body proper. The implication of this is that when researching emotions it is important to take *both* the body and the brain,



and also the social influences into account. The old age group had an attenuated SCL compared to the younger groups, and although the physiological response to an emotion stimuli was similar across the age groups, the reported feeling of emotion did not necessarily correspond to this, and it was suggested that the old age group made use of compensation strategies when assessing or reporting their feeling of emotion, much like strategies used in other tasks.

The universality of emotions has especially been found with regards to the expression of emotion (especially Ekman and colleagues). The present study supports to some extent that there is a universality of emotion through the finding that the emotion reaction is similar across different age groups. However, the support comes with several caveats: If emotions are seen as universals it means that emotions are the same in *all* people across *all* cultures. As discussed in Chapter 1, to call emotions universals imply something ‘just’ biological and within this definition there is no difference between emotion and the feeling of emotion. As this research has shown emotions are not ‘just’ biological, and although the emotion reaction was *similar* across the age groups, it was not the *same*. To apply the term universal to emotion would be to enter into the dualism lingering in many definitions. Instead these findings support a view in which the dualisms are not seen as opposing poles where emotion (and psychological subject and ageing for that matter) is either/or, but instead both/and. The present findings have shown how the relationship between concepts of psychological subject and social morale as well as social context are important for the experience of the feeling of emotion, which in turn through the lifespan development influences emotion itself (e.g. Damasio, 1999). Returning to the discussion in Chapter 2 on how ‘basic emotions’ are already socially constructed the moment we agree to name certain processes or behaviours ‘basic emotions’, the universality of emotions can only exist in the sense that certain brain structures, neurological impulses and physiological activities are same in the human. What we generally refer to as being emotions (which in many cases are the feeling of emotion) are relative embodied emotions, in part depending on the neurological wires, in part depending on the embodied subjectivity, and in part dependent on the social context in which it takes place.

## 11.4. Further work and limitations

These present findings showed how the construction of the feeling of emotion is closely related to the construction of psychological subject and thus bears importance for research in other areas, such as areas of development and ageing, but also for a range of social psychological subjects.

Emotion and ageing research often makes use of questionnaire based studies. Although the general trend in emotion and ageing was supported (that some form of regulation towards positive emotions takes place), the possible explanations for how older people answer the questions, the importance of physiological feedback, the difference between physiological feedback and subjective ratings hereof need to be further researched in order to understand the full implications on not just the ageing persons experience of emotion, but also other age groups. The close relationship between the construction of the feeling of emotion and the construction of psychological subject, need to be considered in emotion research itself, as answers to emotion questions cannot be seen as wholly separate from self-concepts.

The findings of differences with regards to the middle age group – a tendency for increased emotion reaction and feeling of emotion are especially important in clinical settings. Affective disorders already considers age differences, e.g. differentiates between children and adults, but these findings indicate that further differentiation may be beneficial as well. Here the importance of psychological subject and emotion is also important, as affective disorders already have multiple implications for the sufferer. The construction of psychological subject in emotion narratives may be beneficial to research further to know the full extent of whether emotion narratives can be helpful, not just as a ‘talking cure (Pennebaker, 1993) but in as therapeutic reconstruction of oneself, as well as a guide to the therapist/clinician in helping the sufferer.

It was thought that by combining methods it might be possible to gain a further insight into the nature of emotion, without only looking at part of the emotion in brief passing. Of course it would have been even better to also be able to look at the brain processes during the study, but for this study it was not possible. The SCL response especially in the picture viewing did not correspond to the subjective rating, and added knowledge of

the brain processes would have contributed to further knowledge and possible explanations for emotion in general, but also with regards to ageing. Research in ageing has already shown evidence for how the aged person makes use of different compensation strategies in a range of activities. The discrepancy between the high rating of arousal and the SCL, as well as the old age groups overall higher arousal rating, points towards some form of compensation strategy being used, and further research here may be able to answer whether other brain processes or psychological strategies (such as for instance a cognitive reasoning of what level of arousal this picture *should* induce) are used.

A longitudinal study, or a study in which the participants are seen several times may also be beneficial. A future longitudinal study could assess the actual change in both physiological and psychological responses as a person ages. A study which over time measures these responses in the same person could assess whether some of the responses are due to other factors than emotion, such as cognitive processes once the stimuli have become known, or the influence of the research situation on the emotional responses.

A relationship between high and low interview SCL and scores on PANAS was found, regardless of age and gender. This is an interesting relationship, and would need further research to determine the extent to which there is a relationship between emotion reaction level, in the form of SCL, and Positive and Negative Affect.

The sample used in this study all consisted of healthy people, and there was no differences in their scores on the various health test. The old age group was also subjected to a test of cognitive impairment (TIOCS), which they all passed.

Furthermore, all participants had to come to the university to do the study (although taxi was provided for the old age group). For the old group in particular it is important to note that these participants thus constituted a healthy sample, with the ability and interest to do a study like this. Indeed, many of the older participants had either participated in other studies at the university, or would like to since participating in this study. There is therefore the possibility that another sample, if taken from a nursing home for instance, would show other characteristics. Ageing causes different shortcomings, both in cognitive abilities and physical abilities, and it is very possible

that an older person who is not living independently has a different self-concept, and thus would construct themselves and their emotions differently than this present sample. Research has shown how important it is to keep physically and mentally active in order to best preserve one's abilities and ensuring 'healthy ageing', and the sample used here showed all the signs of doing that, just by showing up and taking an interest. These results thus can only show us what the emotion and feeling of emotion is like in a healthy sample, and it would be beneficial to do a comparative study of different age groups who in one way or another is not independent and able. Just like research with people with brain damage have taught us a wealth about how the brain *normally* works, research with people who can no longer manage on their own can perhaps shed more light on the nature of emotions. It is also important to note that in recruiting all the age groups the nature of the study was made clear, and thus the people agreeing to participate had some form of interest in taking about emotions. It is very possible that another group of people, with the same health and characteristics, but without the desire to participate in an emotion study, would have shown different results.

As discussed in Chapter 4 the relationship between the researcher and the researched is important. Whilst the researcher made use of protocols and interview schedules and rehearsed through pilot studies to behave consistently across the interviews, it is all but impossible to resist being pulled into a discursive interaction within each interview, and uphold at least a few cultural and discursive rules, such as nodding, smiling, eye-contact, and uttering an occasional 'mm' or 'yeah' to ensure the participant of being actively listening. Given the subject of some of the narratives, especially the loss stories, the researcher's behaviour may involuntarily have differed in becoming slightly more affected compared to listening to some of the more positive stories. This taught the researcher something important about emotion stories too. Some stories were compelling and interesting and others were less so, and in reflecting upon the stories after the interviews, the researcher could not but note that it was a combination of the interviewee's construction of the event as well as their demeanour in telling the story, which lead to a more or less emotional empathy towards the researched. Thus having found that some stories carried more emotional involvement from the researcher, it was even more imperative to ensure that the guidelines for qualitative analysis was followed strictly, especially with regards to humanism and emotionalism (Silverman, 2001).

## 11.5. Thesis conclusion

From the thesis it has become clear that the study of emotion, both in theory and practise, benefits from a working definition of emotion that take into account the different aspects of emotion such as embodiment, brain-body system, cultural influences and learning, as well as differentiates between emotion and the feeling of emotion. The importance of defining the different aspects of emotion allowed us to not only look at emotion as a unitary concept, but also to look at each concept on its own, thereby learning that although both *emotion* and *the feeling of emotion* does change across the life span they also show similar patterns, generates similar verbal reports, and constructions of emotion narratives. The thesis thus suggests, contrary to Griffiths' (1997) suggestion of a re-categorisation of emotions, that research of emotions can benefit from a unitary category of emotions, even though emotions may not be universal.

It has been shown that our knowledge about emotions can be furthered by making use of methodologies that draws on both qualitative and quantitative analyses of the data, hereby lessening the dualisms so embedded in our society and which may be reflected in research which tend to focus on either body, mind or brain rather than the brain-body system in the social context. The findings of the thesis have advanced our knowledge about emotion and the feeling of emotion, and how they are embodied and relative, not just with regards to age, but with regards to the further social context and social and subjective heritage.

# References

- Adolphs, R. & Tranel, D. (2003). Amygdala damage impairs emotion recognition from scenes only when they contain facial expressions. *Neuropsychologia*, *41*, 1281-1289.
- Adolphs, R., Damasio, H., Tranel, D., Cooper, G. & Damasio, A.R. (2000). A Role for Somatosensory Cortices in the Visual Recognition of Emotion as Revealed by Three-Dimensional Lesion Mapping. *The Journal of Neuroscience* *20*(7), 2683-2690.
- Advanced Learner's Dictionary (1989). Oxford: Oxford University Press.
- Alexopoulos, G.S. (2005). Depression in the elderly. *Lancet* *365*, 1961-1970.
- Alexopoulos, G.S., Buckwalter, K.O.J., Martinez, R., Wainscott, C., Krishnan, K.R. (2002). Comorbidity of late-life depression: an opportunity for research in mechanisms and treatment. *Biological Psychiatry* *52*, 543-558.
- Almaguer, W., Estupiñán, B., Frey, J.U. & Bergado, J.A. (2002). Aging impairs amygdala-hippocampus interactions involved in hippocampal LTP. *Neurobiology of Aging* *23*, 319-324.
- Anderson, N.D. & Craik, F.I.M. (2000). Memory in the Aging Brain. In Tulving, E. & Craik, F.I.M. (eds). *The Oxford Handbook of Memory*. New York: Oxford University Press.
- Anderton, B.H. (2002). Ageing of the brain. *Mechanisms of Ageing and Development*, *123*(7), 811-817.
- Anstey, K.J., Luszcz, M.A. & Sanchez, L. (2001). A re-evaluation of the common factor theory of shared variance among age, sensory function, and cognitive function in older adults. *Journal of Gerontology*, *56B*, 3-11.
- APA – American Psychiatric Association (1995). *DSM IV Diagnostic and Statistical Manual of Mental Disorders*. Washington DC: American Psychiatric Association.
- APA – American Psychological Association (1988). From 'Development and validation of brief measures of positive and negative affect: the PANAS Scales' *Journal of Personality and Social Psychology*, *54*, 1063-70.
- Archer, M. (1995). *Realist Social Theory: the morphogenetic approach*. Cambridge: Cambridge University Press.
- Aristotle (350BCE). Rhetoric book II. Translated by W. Rhys Roberts. <http://classics.mit.edu//Aristotle/rhetoric.html>. February 2003.
- Baars, B.J., Ramsøy, T.Z. & Laureys, S. (2003). Brain, conscious experience and the observing self. *TRENDS in Neurosciences*, *26*(12), 671-675.

- Bäckman, L., Small, B.J. & Wahlin, Å. (2001). Aging and Memory: Cognitive and Biological Perspectives. In J.E. Birren & K.W. Schaie (eds). *Handbook of The Psychology of Aging* (5<sup>th</sup> ed) (pp. 349-377). London: Academic Press.
- Bakhurst, D. (2004). Social Constructionism, Meaning and Mind. *Working paper introduced at SCAR meeting, Loughborough.*
- Bal, M. (1985). *Narratology: Introduction to the Theory of Narrative*. Toronto: University of Toronto Press. In Potter, J. (1996). *Representing Reality. Discourse, Rhetoric and Social Construction*. London: Sage Publications.
- Balota, D.A., Dolan, P.O. & Duchek, J.M. (2000). Memory Changes in Healthy Older Adults. In E. Tulving & F.I.M. Craik (eds). *The Oxford Handbook of Memory*. New York: Oxford University Press.
- Barnes, A. & Thagard, P. (2002). Emotional Decisions. *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society*, 426-429. Erlbaum.
- Barnett, D. & Ratner, H.H. (1997). The Organization and Integration of Cognition and Emotion in Development. *Journal of Experimental Child Psychology*, 67, 303-316.
- Bartlett, F.C. (1932). *Remembering: A study in experimental and social psychology*. New York: Cambridge University Press.
- Bauer, P.J., Stennes, L. & Haight, J.C. (2003). Representation of the inner self in autobiography: Women's and men's use of internal states language in personal narratives. *Memory* 11(1), 27-42
- Bechara, A., Damasio, H. & Damasio, A.R. (2000). Emotion, Decision Making and the Orbitofrontal Cortex. *Cerebral Cortex* 10, 295-307.
- Bechara, A., Damasio, H., Damasio, A.R. & Lee, G.P. (1999). Different contributions of the human amygdala and ventromedial prefrontal cortex to decision-making. *The Journal of Neuroscience* 19(13), 5473-5481.
- Benson, C. (In Press, 2003). The Unthinkable Boundaries of Self: The Role of Negative Emotional Boundaries in the Formation, Maintenance and Transformation of Identities. Final Version of Chapter for: R. Harré & F. Modhaddam (eds). *The self and others: Positioning individuals and groups in personal, political and cultural contexts*. USA: Praeger/Greenwood
- Berntsen, D. (2002). Tunnel memories for autobiographical events: Central details are remembered more frequently from shocking than from happy experiences. *Memory and Cognition* 30(7), 1010-1020.
- Billig, M. (1987). *Arguing and thinking. A rhetorical approach to social psychology*. Cambridge: Cambridge University Press.
- Billig, M. (2001). Humour and Embarrassment: Limits of 'Nice-Guy' Theories of Social Life. *Theory, Culture & Society* 18(5), 23-43.
- Bird, J., Ostler, E.L. & Faragher, R.G.A. (2003). Can we say that senescent cells cause ageing? *Experimental Gerontology* 38, 1319-1326.

- Brannen, J. (2005). Mixed Methods Research: A discussion paper. *NCRM Methods Review Papers*. ESRC National Centre for Research Methods, December 2005.
- Bromley, D.B. (1966). *The psychology of human ageing*. Harmondsworth: Penguin Books Ltd.
- Brown, K. & Kulik, J. (1977). Flashbulb memories. *Cognition* 5, 73-99.
- Bruce V & Young, A. (1986). Understanding face recognition. *British Journal of Psychology* 77, 305-327.
- Bruce, V. and Young, A. (1998). *In the Eye of the Beholder. The Science of Face Perception*. Oxford: Oxford University Press.
- Bryman, A. (2007). Barriers to Integrating Quantitative and Qualitative Research. *Journal of Mixed Methods Research* 1, 8-22.
- Burkitt, I. (1991). *Social Selves: Theories of the Social Formation of Personality*. London: Sage Publications.
- Burkitt, I. (1999). *Bodies of Thought. Embodiment, Identity and Modernity*. London: Sage Publications.
- Bushnell, I.W.R., Sai, F., and Mullin, J.T. (1989). Neonatal recognition of the mother's face. *British Journal of Developmental Psychology* 7(3), 15. In Bruce, V and Young, A. (1998). *In the Eye of the Beholder. The Science of Face Perception*. Oxford: Oxford University Press.
- Butt, T. (1999). Realism, constructionism and phenomenology. In D.J. Nightingale & J. Cromby (eds). *Social Constructionist Psychology. A critical analysis of theory and practice*. Buckingham: Open University Press.
- Calder, A.J., Keane, J., Manly, T., Sprengelmeyer, R., Scott, S., Nimmo-Smith, I. & Young, A.W. (2003). Facial expression recognition across the adult life span. *Neuropsychologia* 41, 195-202.
- Campbell, V.A., Crews, J.E., Moriarty, J.E., Zack, M.M. & Blackman, D.K. (1999). Surveillance for sensory impairment, activity limitation, and health-related quality of life among older adults – United States, 1993-1997. *Morbidity and Mortality Weekly Reports*, 48(SS08), 131-156.
- Canli, T., Zhao, Z., Brewer, J. Gabrieli, J.D.E. & Cahill, L. (2000). Event-Related Activation in the Human Amygdala Associates with Later Memory for Individual Emotional Experience. *The Journal of Neuroscience* 20(RC99), 1-5.
- Cannon, W.B. (1920). *Bodily changes in pain, hunger, fear and rage, An account of recent researches into the function of emotional excitement*. New York: D. Appleton and Company.
- Carlson, N.R. (1992). *Foundations of Physiological Psychology* (2<sup>nd</sup> ed). Needham Heights: Allyn & Bacon, A Division of Simon & Schuster, Inc.



- Carstensen, L.L. & Turk-Charles, S. (1994). The Salience of Emotion Across the Adult Life Span. *Psychology and Aging* 9(2), 259-264.
- Carstensen, L.L. (1995). Evidence for a life-span theory of socioemotional selectivity. *Current Directions in Psychological Science* 4, 151-156.
- Carstensen, L.L., Isaacowitz, D.M. & Charles, S.T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist* 54, 165-181.
- Charles, S.T., Mather, M. & Carstensen, L.L. (2003). Aging and Emotional Memory: The Forgettable Nature of Negative Images for Older Adults. *Journal of Experimental Psychology: General* 132(2), 310-324.
- Clarke, D.D. (2004). "Structured judgement methods" – the best of both worlds? In Z. Todd, B. Nerlich, S. McKeown & D.D. Clarke. *Mixing Methods in Psychology. The integration of qualitative and quantitative methods in theory and practice*. East Sussex: Psychology Press.
- Coffey, C.E., Wilkinson, W.E., Parashos, I.A., Soady, S.A.R., Figiel, S.J., Webb, M.C., Spritzer, C.E. & Djang, W.T. (1992). Quantitative cerebral anatomy of the aging human brain: A cross-sectional study using magnetic resonance imaging. *Neurology* 42, 527-536. In Vinters, H.V. (2001). *Aging and the Human Nervous System*. In J.E. Birren & K.W. Schaie (eds). *Handbook of The Psychology of Aging* (5<sup>th</sup> ed) (pp 135-160). London: Academic Press..
- Coleman, D. (1996). *Emotional Intelligence. Why it can matter more than IQ*. London: Bloomsbury.
- Collins Dictionary & Thesaurus* (2<sup>nd</sup> ed) (2000). China. HarperCollins Publishers.
- Columb, M.O. & Sagadai, S. (2006). Multiple Comparisons. *Current Anesthesai & Critical Care* 17(3-4), 233-236
- Cortazzi, M. (1993). *Narrative Analysis*. London: Falmer Press.
- Crawford, M. (2004). Mars and Venus Collide: A Discursive Analysis of Marital Self-Help Psychology. *Feminism & Psychology* 14(1), 63-79.
- Creswell, J.W. & Tashakkori, A. (2007). Editorial: Developing Publishable Mixed Methods Manuscripts. *Journal of Mixed Methods Research* 2, 107-111.
- Critchley, H.D., Elliott, R., Mathias, C.J. & Dolan, R.J. (2000). Neural Activity Relating to Generation and Representation of Galvanic Skin Conductance Responses: A Functional Magnetic Resonance Imaging Study. *The Journal of Neuroscience* 20(8), 3033-3040.
- Cromby, J. & Nightingale, D.J. (1999). What's wrong with social constructionism? In D.J. Nightingale & J. Cromby (eds). *Social Constructionist Psychology. A critical analysis of theory and practice*. Buckingham. Open University Press.
- Cromby, J. (2004). Theorizing Embodied Subjectivity. *International Journal of Critical Psychology* 15, 133-150.

- Crossley, M.L. (2000). *Introducing Narrative Psychology. Self, trauma and the construction of meaning*. Buckingham: Open University Press.
- Cuthbert, B.N., Schupp, H.T., Bradley, M.M., Birbaumer, N. & Lang, P.J. (2000). Brain potentials in affective picture processing: covariation with autonomic arousal and affective report. *Biological Psychology* 52, 95-111.
- Ycowicz, Y.M. (2000). Memory development and event-related brain potentials in children. *Biological Psychology* 54(1-3), 145-174.
- Damasio, A. (1994). *Descartes Error*. New York: Quill.
- Damasio, A. (1999). *The feeling of what happens. Body, emotion and the making of consciousness*. London: Vintage.
- Damasio, A.R., Grabowski, T.J., Bechara, A., Damasio, H., Ponto, L.L.B., Parvizi, J. & Hichwa, R.D. (2000). Subcortical and cortical brain activity during the feeling of self-generated emotions. *Nature Neuroscience* 3(10), 1049-1056.
- Dancey, C.P. & Reidy, J. (2004). *Statistics Without Maths for Psychology. Using SPSS for Windows™ (3<sup>rd</sup> ed)*. Essex: Peason Education Limited.
- Darwin, C. (1965)[1872]: *The Expression of Emotions in Man and Animals*. London: The University of Chicago.
- Davitz, J. (1969). *The Language of Emotion*. London: Academic Press. In Heelas, P. (1996). *Emotion Talk across Cultures*. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- De Magalhaes, J.P. & Sandberg, A. (2005). Cognitive aging as an extension of brain development: A model linking learning, brain plasticity, and neurodegeneration. *Mechanisms of Ageing and Development* 126, 1026-1033.
- de Sousa, R. (2001). Moral emotions in black-and-white and colour. Text behind a talk delivered at a conference on Emotion and Rationality in Ulm, Germany, June 2001. <http://www.chass.utoronto.ca/~sousa/blackandwhite.html>. 05.11.2002.
- de Sousa, R. (2001). Moral Emotions. *Ethical Theory and Moral Practice* 4. 109-126. <http://www.chass.utoronto.ca/~sousa/moralemotions.html>. 05.11.2002.
- Decety, J. & Chaminade, T. (2003). When the self represents the other: A new cognitive neuroscience view on psychological identification. *Consciousness and Cognition* 12, 577-596.
- DeConcini, B. (1990). *Narrative Remembering*. Lanham, University Press of America, Inc.
- Durkin, K. (1995). *Developmental Social Psychology. From Infancy to Old Age*. Oxford: Blackwell Publishers, Ltd.
- Edwards, D. & Potter, J. (1992). *Discursive Psychology*. London: Sage Publications.
- Edwards, D. (1997). *Discourse and Cognition*. London. Sage Publications.

- Edwards, D. (1999). Emotion Discourse. *Culture & Psychology* 5(3), 271-291.
- Edwards, D., Ashmore, M. & Potter, J. (1995). Death and Furniture: the rhetoric, politics and theology of bottom line arguments against relativism. *History of the Human Sciences* 8(2), 25-49.
- Ekman, P. & Friesen, W.V. (1971). Constants across cultures in the face and emotion. *Journal of Personality and Social Psychology* 17(2), 124-129.
- Ekman, P. (1984). Expression and the nature of emotion. In K. Scherer & P. Ekman (eds). *Approaches to emotion*. Hillsdale: Erlbaum.
- Ekman, P. (1993). Facial Expression and Emotion. *American Psychologist* 48(4), 384-392. [www.paulekman.com/publications](http://www.paulekman.com/publications). 30.04.2003.
- Ekman, P. (1999). Basic Emotions. Chapter 3. In T. Dalgleish & M. Power (eds). *Handbook of Cognition and Emotion*. Sussex: John Wiley & Sons Ltd. [www.paulekman.com/publications](http://www.paulekman.com/publications). 30.04.2003.
- Ekman, P., Levenson, R.W. & Friesen, W.V. (1983). Autonomic nervous system activity distinguishes between emotions. *Science* 221, 1208-1210.
- Festinger, L. (1964). Conflict, decision, and dissonance. Stanford, California: Stanford University Press. In Zajonc, R.B. (1980). *Feeling and Thinking. Preferences Need no Inferences*. *American Psychologist* 35(2), 151-175.
- Fiorito, E.R. & Simons, R.F. (1994). Emotional imagery and physical anhedonia. *Psychophysiology* 31, 513-521.
- Fisher, R.P. & Geiselman, R.E. (1992). *Memory-enhancing Techniques for Investigative Interviewing: The Cognitive Interview*. Springfield III: Charles C Thomas.
- Foster, P.S. & Webster, D.G. (2001). Emotional memories: the relationship between age of memory and the corresponding psychophysiological responses. *International Journal of Psychophysiology* 41, 11-18.
- Fountoulakis, K.N., Bech, P., Panagiotidis, P., Siamouli, M., Kantartzis, S., Papadopoulou, A., Papadopoulou, M., Kaprinis, S., Kourila, E., Iacovides, A. & St. Kaprinis, G. (2006). Comparison of depressive indices: Reliability, validity, relationship to anxiety and personality and the role of age and life events. *Journal of Affective Disorders* 97, 187-95.
- Francis, B. (2006). Heroes or zeroes? The discursive positioning of 'underachieving boys' in English neo-liberal education policy. *Journal of Education Policy* 21(2), 187-200.
- Freud, S. (1999 [1899]). *The interpretation of dreams. A new translation by Joyce Crick*. Oxford: Oxford University Press.
- Gagliese, L. & Melzack, R. (2003). Age-related differences in the qualities but not the intensity of chronic pain. *Pain* 104(3), 597-608.
- Garson (2006). <http://www2.chass.ncsu.edu/garson/PA765/anova.htm>

- Gazzaniga, M.S. & LeDoux, J.E. (1978). *The Integrated Mind*. London: Plenum Press.
- Gazzaniga, M.S. & Smylie, C.S. (1984). What does language do for a right hemisphere? In M.S. Gazzaniga (ed). *Handbook of Cognitive Neuroscience*. New York: Plenum Press. In Griffiths, P.E. (1997). *What Emotions Really Are. The Problem of Psychological Categories*. London: The University of Chicago Press.
- Gazzaniga, M.S. (1998). Brain and Conscious Experience. *Consciousness: At the Frontiers of Neuroscience, Advances in Neurology* 77, 181-193
- Gazzaniga, M.S., Fendrich, R. & Wessinger, C.M. (1994). Blindsight reconsidered. *Current Directions in Psychological Science* 3, 93-96.
- Gergen, K. (1998). Narrative, Moral Identity and Historical Consciousness: A Social Constructionist Account. Draft copy appearing as, "Erzählung, moralische Identität und historisches Bewusstsein. Eine sozialkonstruktivistische Darstellung". In J. Straub (ed) (1998) *Identität und historisches Bewusstsein*. Frankfurt: Suhrkamp.  
<http://www.swarthmore.edu/SocSci/kgergen1>
- Gergen, K.J. & Gergen, M.M. (1986). Narrative Form and the Construction of Psychological Science. In T.R. Sarbin (ed). *Narrative Psychology. The Storied Nature of Human Conduct*. London: Praeger.
- Gilleard, C. & Higgs, P. (2000). *Cultures of Ageing: Self, citizen and the body*. Harlow: Prentice Hall.
- Ginsburg, G.P. & Harrington, M.E. (1996). Bodily States and Context in Situated Lines of Action. Chapter 10, pp. 229-258. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Gleitman, H., Fridlund, A.J. & Reisberg, D. (2000). *Basic Psychology* (5<sup>th</sup> ed). London: W.W. Norton & Company.
- Goffman, E. (1967). *The Presentation of Self in Everyday Life*. London: The Penguin Press. In Parrott, W.G. & Harré, R. (1996). Embarrassment and the Threat to Character. Chapter 2, pp. 39-56. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Goldberg (1978). General Health Questionnaire. Reproduced in M. Johnston, S. Wright & J. Weinman (eds). *Measures in Health Psychology: A Users Portfolio*. Windsor: The NFER-NELSON Publishing Company Ltd.
- Gordi, T. & Khamis, H. (2004) Simple solution to a common statistical problem: Interpreting multiple tests. *Clinical Therapeutics*, 26(5), 780-786.
- Griffiths, P.E. (1997). *What Emotions Really Are. The Problem of Psychological Categories*. London: The University of Chicago Press.
- Griffiths, P.E. (2001). Emotion and Expression. *International Encyclopedia of the Social and Behavioural Sciences* (Elsevier 2001) Article 3/10/050.

- Gross, J.J., Carstensen, L.L., Pasupathi, M., Tsai, J., Skorpen, C.G. & Hsu, A.Y.C. (1997). Emotion and Aging: Experience, Expression, and Control. *Psychology and Aging* 12(4), 590-599.
- Gunning-Dixon, F.M., Gur, R.C., Perkins, A.C., Schroeder, L., Turner, T., Tureksky, B.I., Chan, R.M., Loughhead, J.W., Alsop, D.C., Maldjian, J. & Gur, R.E. (2003). Age-related differences in brain activation during emotional face processing. *Neurobiology of Aging* 24, 285-295.
- Gur, R.C., Schroeder, L., Turner, T., McGrath, C., Chan, R.M., Turetsky, B.I., Alsop, D., Maldjian, J. & Gur, R.E. (2002). Brain Activation during Facial Emotion Processing. *NeuroImage* 16, 651-662.
- Hammersley, M. (1996). The relationship between qualitative and quantitative research: paradigm loyalty versus methodological eclecticism. In J.T.E. Richardson (ed). *Handbook of Qualitative Research Methods for Psychology and the Social Sciences*. Oxford: Blackwell.
- Hancock, P.J.B, Bruce, V. & Burton, M. (2000). Recognition of unfamiliar faces. *Trends in Cognitive Sciences* 4(9), 330-337,
- Hanoch, Y. (2002). "Neither an angel nor an ant": Emotion as an aid to bounded rationality. *Journal of Economic Psychology* 23, 1-25.
- Hariri, A.R., Mattay, V.S., Tessitore, A., Fera, F. & Weinberger, D.R. (2003). Neocortical Modulation of the Amygdala Response to Fearful Stimuli. *Biological Psychiatry* 53, 494-501.
- Harré, R. (1999). Discourse and the embodied person. In D.J. Nightingale & J. Cromby (eds). *Social Constructionist Psychology. A critical analysis of theory and practice*. Buckingham: Open University Press.
- Harré, R. (2000). Personalism in the Context of a Social Constructionist Psychology: Stern and Vygotsky. *Theory and Psychology* 10(6), 731-748.
- Harré, R. (2002). Public Sources of the Personal Mind: Social Constructionism in Context. *Theory and Psychology* 12(5), 611-623.
- Harré, R. & Crystal, D. (2004). Discursive analysis and the interpretation of statistics. In Z. Todd, B. Nerlich, S. McKeown & D.D. Clarke. *Mixing Methods in Psychology. The integration of qualitative and quantitative methods in theory and practice*. East Sussex: Psychology Press.
- Heelas, P. (1996). Emotion Talk across Cultures. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Hellawell, S.J. & Brewin, C.R. (2004). A comparison of flashbacks and ordinary autobiographical memories of trauma: content and language. *Behaviour Research and Therapy* 42(1), 1-12.
- Hempel, R.J., Tulen, J.H.M., van Beveren, N.J.M., van Steenis, H.G., Mulder, P.G.H. & Hengeveld, M.V. (2005). Physiological responsivity to emotional pictures in schizophrenia. *Journal of Psychiatric Research* 39, 509-518.

- Henry, J. (2005). Children get lessons in 'how to feel'. *Sunday Telegraph*, November 27, 13.
- Henwood, K. (2004). Reinventing validity. Reflections on principles and practices from beyond the quality-quantity divide. In Z. Todd, B. Nerlich, S. McKeown & D.D. Clarke. *Mixing Methods in Psychology. The integration of qualitative and quantitative methods in theory and practice*. East Sussex: Psychology Press.
- Hinrichsen, H., Wright, F., Waller, G. & Meyer, C. (2003). Social anxiety and coping strategies in the eating disorders. *Eating Behaviors* 1(2), 117-126).
- Hipkiss, A.R. (2003). Letter to the Editor. The necessity of chance: would elimination of aging suppress evolution? *Experimental Gerontology* 38, 1029.
- Holmes, E.A., Grey, N. & Young, K.A.D. (2005). Intrusive images and "hotspots" of trauma memories in Posttraumatic Stress Disorder: an exploratory investigation of emotions and cognitive themes. *Journal of Behavior Therapy and Experimental Psychiatry* 36, 3-17.
- Holtzman, J.D., Sidtis, J.J., Volpe, B.T., Wilson, D.H. & Gazzaniga, M.S. (1981). Dissociation of spatial information for stimulus localization and the control of attention. *Brain* 104, 861-872.
- Hornung, O.P., Danker-Hopfe, H. & Heuser, I. (2005). Age-related changes in sleep and memory: commonalities and interrelationships. *Experimental Gerontology* 40, 279-285.
- Howell, D.C: (1995). *Fundamental Statistics for the Behavioural Sciences* (3<sup>rd</sup> ed). Belmont: Duxbury Press.
- Howitt, D. & Cramer, D. (1997). *An Introduction to Statistics in Psychology. A Complete Guide for Students*. London: Prentice Hall.
- Howitt, D., Billig, M., Cramer, D., Edwards, D., Kniveton, B., Potter, J. & Radley, A. (1989). *Social Psychology. Conflicts and Continuities*. Milton Keynes: Open University Press.
- Iglesias, I. (1996). Vergüenca ajena. Vignette 4, pp 122-131. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Izard, C.E., Huebner, R.R., Risser, D, McGinnes, G.C. & Dougherty, L.M. (1980). The young infant's ability to produce discrete emotion expressions. *Developmental Psychology* 16, 132-140.
- J + J Engineering Inc, Bio-Medical Instruments Inc, USA. (Physiolab)
- Jensen, H. (1995). Granatchockens historiske betydelse. Om offrets privilegieställning i vår tid. *Häftan for Kritiske Studier*, 11-30.
- Johnson, M.H., Dziurawiec, S., Ellis, H., and Morton, J. (1991). Newborns' preferential tracking of face-like stimuli and its subsequent decline. *Cognition* 40, 1-19. In Bruce, V

- and Young, A. (1998). *In the Eye of the Beholder. The Science of Face Perception*. Oxford: Oxford University Press.
- Johnson-Laird, P.N. & Oatley, K. (1992). Basic emotions, rationality and folk theory. *Cognition and Emotion* 6, 201-223.
- Kahn, J.H., Hessling, R.M. & Russell, D.W. (2003). Social support, health, and well-being among the elderly: what is the role of negative affectivity? *Personality and Individual Differences* 35, 5-17.
- Kenney, R.A. (1989). *Physiology of Aging. A Synopsis* (2<sup>nd</sup> ed). London: Year Book Medical Publishers, Inc.
- Kirkwood, T.B.L. (2003). Genes that shape the course of ageing. *TRENDS in Endocrinology and Metabolism* 14(8), 34.
- Kring, A.M. & Gordon, A.H. (1998). Sex Differences in Emotion: Expression, Experience, and Physiology. *Journal of Personality and Social Psychology* 7(3), 686-703.
- Landman, J. (1996). Social Control of 'Negative' Emotions: The Case of Regret. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Lang, P. & Öhman, D.V. (1988). *The International Affective Picture System [photographic studies] Technical report*. Gainesville: The Center for Research in Psychophysiology, University of Florida.
- Lang, P.J., Bradley, M.M. & Cuthbert, B.N. (1997). *International Affective Picture System (IAPS). Technical, Manual and Affective Ratings*. Gainesville: NIMH Center for the study of emotion and attention.
- Lang, P.J., Bradley, M.M. & Cuthbert, B.N. (2001). *International affective picture system (IAPS). Instruction manual and affective ratings*. Technical Report A-5. The Center for Research in Psychophysiology, University of Florida.
- Lang, P.J., Rice, D.G. & Sternbach, R.A. (1972). The psychophysiology of emotion. In N.S. Greenfield & R.A. Sternbach (eds). *Handbook of Physiology*. New York: Holt, Rinehart and Winston, Inc.
- Lange, C.G. & James, W (1922 [1884]). *The Emotions*. Baltimore: Williams & Wilkins Company.
- Langley, L.K & Madden, D.J. (2000). Functional Neuroimaging of Memory: Implications for Cognitive Aging. *Microscopy Research and Technique* 51, 75-84.
- Lauria, G., Holland, N., Hauer, P., Cornblath, D.R., Griffin, J.W., McArthur, J.C. (1999). Epidermal innervation: changes with aging, topographic location, and in sensory neuropathy. *Journal of the Neurological Sciences* 164, 172-178.
- Lazarus, R.S. (1968). Emotions and adaptation: Conceptual and empirical relations. In W.J. Arnold (ed). *Nebraska Symposium on Motivation*, pp 175-266). Lincoln:

- University of Nebraska Press. In Lazarus, R.S. (1984). On the Primacy of Cognition. *American Psychologist* 39(2), 124-129.
- Lazarus, R.S. (1982). Thoughts on the relations between emotion and cognition. *American Psychologist* 37, 1019-1024.
- Lazarus, R.S. (1984). On the Primacy of Cognition. *American Psychologist* 39(2), 124-129.
- LeDoux, J. (1998). *The Emotional Brain. The Mysterious Underpinnings of Emotional Life*. London: Phoenix.
- Levenson, R.W., Carstensen, L.L. & Gottman, J.M. (1994). The Influence of Age and Gender on Affect, Physiology, and Their Interrelations: A Study of Long-Term Marriages. *Journal of Personality and Social Psychology* 67(1), 56-68
- Levenson, R.W., Carstensen, L.L., Friesen, W.V. & Ekman, P. (1991). Emotion, Physiology, and Expression in Old Age. *Psychology and Aging* 6(1), 28-3.
- Leventhal, H., Rabin, C., Leventhal, E.A. & Burns, E. (2001). Health Risk Behaviors and Aging. In J.E. Birren & K.W. Schaie (eds). *Handbook of The Psychology of Aging*. (5<sup>th</sup> ed) (pp186-214). London: Academic Press.
- Lewis, M. (1993). Self-conscious emotions: embarrassment, pride, shame, and guilt. In M. Lewis & J.M. Haviland (eds). *Handbook of Emotions* (pp. 563-573). New York: Guildford. In K. Oakley & J.M. Jenkins (eds) (1996). *Understanding Emotions*. Oxford: Blackwell Publishing.
- Li, K.Z.H. & Lindenberger, U. (2002). Relations between aging sensory/sensorimotor and cognitive functions. *Neuroscience and Biobehavioral Reviews* 26, 777-783.
- Li, K.Z.H., Lindenberger, U., Freund, A.M. & Baltes, P.B. (2001). Walking while memorizing: age-related differences in compensatory behavior. *Psychological Science* 12, 230-237.
- Lindenberger, U. & Baltes, P.B. (1994). Sensory Functioning and Intelligence in Old Age: A Strong Connection. *Psychology and Aging* 9(3), 339-355.
- Lindenberger, U., Scherer, H. & Baltes, P.B. (2001). The Strong Connection Between Sensory and Cognitive Performance in Old Age: Not Due to Sensory Acuity Reductions Operating During Cognitive Assessment. *Psychology and Aging* 16(2), 196-205.
- Lindqvist, A. (2005). The Notion of Mental Illness in Cognitive Behavioral Therapy from a Critical Point of View. *Påbyggnadskurs i Psykologi, HT. Stockholms Universitet Psykologiske Institutionen*.
- Lutz, C.A. (1996). Engendered Emotion: Gender, Power, and the Rhetoric of Emotional Control in American Discourse. Chapter 7, pp. 151-170. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.



- Malatesta, C.Z. & Kalnok, M. (1984). Emotional Experience in Younger and Older Adults. *Journal of Gerontology* 39, 301-308.
- Mar, R.A. (2004). The neuropsychology of narrative: story comprehension, story production and their interrelation. *Neuropsychologia* 42, 1414-1434.
- Mather, M. & Carstensen, L.L. (2005). Aging and motivated cognition: the positivity effect in attention and memory. *TRENDS in Cognitive Sciences* 9(10), 496- 502.
- Matlin, M.W. (1971). Response, competition, recognition, and affect. *Journal of Personality and Social Psychology*, 19. 295-300. In Zajonc, R.B. (1980). *Feeling and Thinking. Preferences Need no Inferences. American Psychologist* 35(2), 151-175.
- Mazurski, E.J., Bond, N.W., Siddle, D.A.T. & Lovibond, P.F. (1996). Conditioning with facial expressions of emotions: Effects of sex and age. *Psychophysiology* 3, 416-425.
- Memon, A. & Yarmey, A.D. (1999). Earwitness recall and identification: comparison of the cognitive interview and the structured interview. *Perceptual and Motor Skills* 88, 797-807.
- Mills, M.A. (1997). Narrative Identity and Dementia: a Study of Emotion and Narrative in Older People with Dementia. *Aging and Society* 17, 673-698.
- Moreland, R.L. & Zajonc, R.B. (1977). Is stimulus recognition a necessary condition for the occurrence of exposure effects? *Journal of Personality and Social Psychology*, 35. 191-199. In Zajonc, R.B. (1980). *Feeling and Thinking. Preferences Need no Inferences. American Psychologist* 35(2), 151-175.
- Moreland, R.L. & Zajonc, R.B. (1979). Exposure effects may not depend on stimulus recognition. *Journal of Personality and Social Psychology*, 37,1085-1089. In Zajonc, R.B. (1980). *Feeling and Thinking. Preferences Need no Inferences. American Psychologist* 35(2), 151-175.
- Morgan, D.L. (2007). Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research* 1, 48-76.
- Morgan, K., Dallosso, H.M., Arie, T., Byrne, E.J., Jones, R.& Waite, J. (1987). Mental Health and Psychological well-being among the old and the very old living at home. *British Journal of Psychiatry* 150, 801-807
- Moser, K. & Majeed, A. (1999). Prevalence of treated chronic diseases in general practice in England and Wales – trends over time and variations by the ONS area classification. *Health Statistics Quarterly* 02, 25-32
- Murray, M. (2003). Narrative Psychology. In J.A. Smith (ed). *Qualitative Psychology. A Practical Guide to Research Methods*. London. Sage Publications.
- Nightingale, D.J. & Cromby, J. (1999) (eds). *Social Constructionist Psychology. A critical analysis of theory and practice*. Buckingham. Open University Press.

- Nightingale, D.J. & Cromby, J. (2002). Social Constructionism as Ontology. Exposition and Example. *Theory and Psychology* 12(5), 701-713.
- Nisbett, R.E. & Wilson, T. (1977). On saying more than we can know: Verbal reports on mental processes. *Psychological Review* 84, 231-259. In Griffiths, P.E. (1997). *What Emotions Really Are. The Problem of Psychological Categories*. London: The University of Chicago Press.
- Oatley, K. & Jenkins, J.M. (1996). *Understanding Emotions*. Oxford. Blackwell Publishing.
- Office for National Statistics (2000). Lifetime experience of stressful life events: by type of event and gender, 2000: Social Trends 32.  
<http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=5216> 15.05.03
- Orfilaa, F., Ferrera, M., Lamarcaa, R., Tebeb, C., Domingo-Salvanya, A. & Alonso, J. (2006). Gender differences in health-related quality of life among the elderly: The role of objective functional capacity and chronic conditions. *Social Science and Medicine* 63(9), 2367-80.
- Ortony, A. & Clore, G.L. (1989). Emotions, Moods, and Conscious Awareness. *Cognition and Emotion* 3(2), 125-137.
- Oxford Advanced Learner's Dictionary* (1989). Oxford: Oxford University Press.
- Panksepp, J. (1982). Toward a general psychobiological theory of emotions. *Behavioral and Brain Sciences* 5, 407-467.
- Parker, I. (1999)(ed). *Deconstructing Psychopathology*. London: Sage.
- Parker, I. (1999). Against relativism in psychology, on balance. *History of the Human Sciences* 12(4), 61-78.
- Parker, I. (1999). Critical reflexive humanism and critical constructionist psychology. In D.J. Nightingale & J. Cromby (eds). *Social Constructionist Psychology. A critical analysis of theory and practice*. Buckingham. Open University Press.
- Parrott, W.G. & Harré, R. (1996). Embarrassment and the Threat to Character. Chapter 2, pp. 39-56. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Parrott, W.G. & Harré, R. (1996). Introduction. Some complexities in the study of emotions. Chapter 1, pp. 1-20. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Pasupathi, M. & Carstensen, L.L. (2003). Age and Emotional Experience During Mutual Reminiscing. *Psychology and Aging* 18(3), 430-442.
- Pennebaker, J.W. (1993). Putting stress into words: Health, linguistic and therapeutic implications. *Behavioural Research Therapy* 31(6), 539-548.

- Perrott, D.A., Goodenough, B. & Champion, G.D. (2004). Children's ratings of intensity and unpleasantness of post-operative pain using facial expression scales. *European Journal of Pain* 8, 199-127.
- Phan, K.L., Wager, T., Taylor, S.F. & Liberzon, I. (2002). Review. Functional Neuroanatomy of Emotion: A Meta-Analysis of Emotion Activation Studies in PET and fMRI. *NeuroImage* 16, 331-348.
- Phillipot, P., Schaefer, A. & Herbert, G. (2003). Consequences of specific processing of emotional information: Impact of general versus specific autobiographical memory priming on emotion elicitation. Accepted in *Emotion*, May 2003.
- Plutchik, R. (1980). Emotion: A psychoevolutionary synthesis. New York: Harper & Row. In LeDoux, J. (1998). *The Emotional Brain. The Mysterious Underpinnings of Emotional Life*. London: Phoenix.
- Plutchik, R. (1994). *The Psychology and Biology of Emotion*. New York: Harper Collins College Publishers.
- Pomerantz, A. (1986). 'Extreme Case Formulations: A New Way of Legitimizing Claims', in G. Button, P. Drew and J. Heritage (eds). Human Studies (Interaction and Language Use Special Issue), 9:219-30. In Potter, J. & Wetherall, M. (1987). *Discourse and Social Psychology. Beyond Attitudes and Behaviour*. London: Sage Publications.
- Potter, J. & Wetherall, M. (1987). *Discourse and Social Psychology. Beyond Attitudes and Behaviour*. London: Sage Publications.
- Potter, J. (1996). *Representing Reality. Discourse, Rhetoric and Social Construction*. London: Sage Publications.
- Prinz, J. (2002). Emotion, Psychosemantics, and Embodied Appraisals. *Based on RIP Conference Lecture June 2001*.
- Radley, A. (1994). *Making Sense of Illness. The Social Psychology of Health and Disease*. London: Sage Publications.
- Rasmussen, J.G. & Cromby, J. (2004). The construction of self in emotion narratives. *BPS Consciousness and Experimental Psychology Section Conference, Oxford*.
- Read, K. (1967). Morality and the concept of the person among the Gahuku-Gama, in J. Middleton (ed). *Myth and Cosmos*. New York: Natural History Press, pp 185-230. In Heelas, P. (1996). Emotion Talk across Cultures. In R. Harré & W.G. Parrott (eds). *The Emotions. Social, Cultural and Biological Dimensions*. London: Sage Publications.
- Reber, A.S. (1995). *Dictionary of Psychology* (2<sup>nd</sup> ed). London. Penguin.
- Riesman, D., Glazer, N & Denney, R (1989). *The Lonely Crowd*. New York: Yale University Press.
- Riessman, C.K. (1993). *Narrative Analysis*. London: Sage Publications.
- Riley, S., Schouten, W. & Cahill, S. (2003). Exploring the Dynamics of Subjectivity and Power Between Researcher and Researched. *Forum Qualitative*

- Sozialforschung/Forum: Qualitative Social Research, 4.2. <http://www.qualitative-research.net/fqs-texte/2-03/2-03rileyetal-e.htm>. 04.05.2004
- Rocco, T.S., Bliss, L.A., Gallagher, S. & Perez-Prado, A. (2003). Taking the Next Step: Mixed Methods Research in Organizational Systems. *Information Technology, Learning, and Performance Journal* 21(1), 19-29.
- Rose, N. (1999). *Powers of Freedom: reframing political thought*. Cambridge: Cambridge University Press.
- Rowe, J. & Kahn, R. (1987). Human aging: Usual and successful. *Science* 237, 143-149.
- Rutten, B.P.F., Korr, H., Steinbusch, H.W.M. & Schmitz, C. (2003). The aging brain: less neurons could be better. *Mechanisms of Ageing and Development* 124, 349-355v.
- Sacks, O. (1985). *The Man Who Mistook His Wife for a Hat*. London: Picador.
- Schachter, S. & Singer, J.E. (1962). Cognitive, Social and Physiological Determinants of Emotional State. *Psychological Review* 69(5), 379-399.
- Schaie, K.W. & Willis, S.L. (2002). *Adult development and ageing* (5<sup>th</sup> ed). New Jersey: Prentice Hall.
- Schiffrin, D. (1987). *Discourse Markers. Studies in Interactional Sociolinguistics*. Cambridge: Cambridge University Press.
- Schooler, J.W. & Eich, E. (2000). Memory for Emotional Events. In E. Tulvig & F.I.M. Craik (eds). *The Oxford Handbook of Memory*. New York: Oxford University Press.
- Sherrington (1900). Proceedings of the Royal Society. In Cannon, W.B. (1920). Bodily changes in pain, hunger, fear and rage, An account of recent researches into the function of emotional excitement. New York: D. Appleton and Company. In Cannon, W.B. (1920). *Bodily changes in pain, hunger, fear and rage, An account of recent researches into the function of emotional excitement*. New York: D. Appleton and Company.
- Silverman, D. (2000). *Doing Qualitative Research. A Practical Handbook*. London: Sage Publications.
- Silverman, D. (2001). *Interpreting Qualitative Data. Methods for Analysing Talk, Text and Interaction* (2<sup>nd</sup> ed). London: Sage Publications.
- Strack, F., Martin, L.L. & Stepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobstrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology* 54, 768-777.
- Strongman, K.T. & Overton, A.E. (1999). Emotion in Late Adulthood. *Australian Psychologist* 34(2), 104-110.
- Tashakkori, A. & Creswell, J.W. (2007). Editorial: The New Era of Mixed Methods. *Journal of Mixed Methods Research* 1, 3-7.

- Tashakkori, A. & Teddlie, C. (1998). *Mixed Methodology. Combining Qualitative and Quantitative Approaches*. London: Sage Publications.
- Taylor, S.F., Phan, K.L., Decker, L.R. & Liberzon, I. (2003). Subjective rating of emotionally salient stimuli modulates neural activity. *NeuroImage 18*, 650-659.
- Teachmana, B.A. (2006). Aging and Negative Affect: The Rise and Fall and Rise of Anxiety and Depression Symptoms *Psychology and Aging 21*(1), 201-207.
- Thomas, S.P. (2003). Men's Anger: A Phenomenological Exploration of its Meaning in a Middle-Class Sample of American Men. *Psychology of Men & Masculinity 4*(2), 163-175.
- Tomkins, S.S. (1962). Affect, imagery, consciousness. New York: Appleton-Century-Crofts. In LeDoux, J. (1998). *The Emotional Brain. The Mysterious Underpinnings of Emotional Life*. London: Phoenix.
- Tong, R. (2007). Feminist thought in transition: Never a dull moment. *The Social Science Journal 44*, 23-39.
- Toolan, M.J. (2001). *Narrative: a critical linguistic introduction*. London: Routledge.
- Toussaint, O. (2003). Normal brain aging: a commentary. *Neurobiology of Aging 24*, 129-130.
- Tulving, E. & Craik, F.I.M. (eds) (2000). *The Oxford Handbook of Memory*. New York: Oxford University Press.
- Tuohya, A., Knussen, C. & Wrennalla, M.J. (2005). Effects of Age on Symptoms of Anxiety and Depression in a Sample of Retired Police Officers. *Psychology and Aging 20*(2), 202-210.
- Valentijn, S.A.M., van Boxtel, M.P.J., van Hooren, S.A.H., Bosma, H., Beckers, H.J.M., Ponds, R.W.H.M. & Jolles, J. (2005). Change in Sensory Functioning Predicts Change in Cognitive Functioning: Results from a 6-Year Follow-Up in the Maastricht Aging Study. *Journal of the American Geriatrics Society 53*(3), 374.
- van Boxtel, M.P.J., Menheere, P.P.C.A., Bekers, O., Hogervorst, E. & Jolles, J. (2004). Thyroid function, depressed mood, and cognitive performance in older individuals: the Maastricht Aging Study. *Psychoneuroendocrinology 29*, 891-898.
- van den Hout, M.A., de Jong, P. & Kindt, M. (2000). Masked fear words produce increased SCRs: An anomaly for Öhman's theory of pre-attentive processing in anxiety. *Psychophysiology 37*, 283-288.
- van Giezen, A.E., Arensman, E., Spinhoven, P. & Wolters, G. (2005). Consistency of memory for emotionally arousing events: A review of prospective and experimental studies. *Clinical Psychology Review 25*, 935-953.
- van Hooren, S.A.H., Valentijn, S.A.M., Bosma, H., Ponds, R.W.H.M., van Boxtel, M.P.J. & Jolles, J. (2005). Relation Between Health Status and Cognitive Functioning: A 6-Year Follow-Up of the Maastricht Ageing Study. *The Journals of Gerontology 60*, 57-60.

- Vinters, H.V. (2001). Aging and the Human Nervous System. In J.E. Birren & K.W. Schaie (eds). *Handbook of The Psychology of Aging* (5<sup>th</sup> ed). (pp 35-160). London: Academic Press.
- Walker, A. & Maltby, T. (1997). *Ageing Europe*. Buckingham: Open University Press.
- Walkerdine, V. (2003). Reclassifying upward mobility: femininity and the neoliberal subject. *Gender & Education* 15, 237-247.
- Walkerdine, V. (2004). Neoliberalism, femininity and choice. <http://www.lse.ac.uk/collections/newFemininities/walkerdine.pdf> (15.04.2007)
- Watson, D., Clark, L.A. & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology* 54, 1063-1070.
- Whitbourne, S.K. (2002). *The Aging Individual. Physical and Psychological Perspectives* (2<sup>nd</sup> ed). New York: Springer Publishing Company.
- Wierzbicka, A. (1999). *Emotions Across Languages and Cultures: Diversity and Universals*. Cambridge. Cambridge University Press.
- Wight, R.G., Aneshensel, C.S., Seeman, M. & Seeman, T.E. (2003). Late life cognition among men: A life course perspective on psychological experience. *Archives of Gerontology and Geriatrics* 37(2), 173-193.
- Willig, C. (2001). *Introducing qualitative research in psychology. Adventures in theory and method*. Maidenhead: Open University Press.
- Wittgenstein, L. (1968). *Philosophical Investigations*. Oxford: Basil Blackwell. In Silverman, D. (2001). *Interpreting Qualitative Data. Methods for Analysing Talk, Text and Interaction* (2<sup>nd</sup> ed). London: Sage Publications.
- Woffitt, R. (1992). *Telling tales of the unexpected: The organization of factual discourse* Hemel Hempstead: Harvester Wheatsheaf.
- Wundt, W. (1907). *Outlines of psychology*. Leipzig: Wilhelm Englemann. In Zajonc, R.B. (1980). Feeling and Thinking. Preferences Need no Inferences. *American Psychologist* 35(2), 151-175.
- Yaffe, K., Blackwell, T., Gore, R., Sands, L., Reus, V. & Browner, W.S. (1999). Depressive symptoms and cognitive decline in non-demented elderly: a prospective study. *Archives of Gen Psychiatry* 56, 425-30.
- Zajonc, R.B. (1980). Feeling and Thinking. Preferences Need no Inferences. *American Psychologist* 35(2), 151-175.
- Zajonc, R.B. (1984) On the Primacy of Affect. *American Psychologist* 39(2), 117-123.
- Zhu, J. & Thagard, P. (2002). Emotion and action. *Philosophical Psychology* 15(1), 19-36.

## Participant Information Sheet

# Participant Information Sheet

## The feeling of emotion across the lifespan

### **Nature of study**

The aim of this study is to investigate whether or not the perception and the experience of a given emotion changes across the lifespan. The study is based on the belief that the nature of emotions consists of physiological, neurological, cognitive aspects within a social context.

### **What does the study involve?**

Participating in the study will involve partaking in an interview, which will be audio-recorded and transcribed. The participant will be asked to tell of an emotional event, which is of significance to themselves. The interview will take about half an hour.

The study will also involve looking at a series of pictures, the content of which may show some explicit scenes of varied nature. The participant is expected to look at the pictures and to rate their valence and explicitness. This part of the study will take about 20 minutes.

The participant will at all times be connected to a GSR meter. The galvanic skin response is an electrical conductivity that naturally occurs at all times, and varies according to the amount of perspiration on the palm of the hand. It will be monitored by placing two electrodes on two fingers on one hand of the participant. A very small current is passed between the electrodes, which is in no way harmful, and cannot be consciously felt. The participant will be asked to wipe the hands with antibacterial wipes, and the electrodes will be put on with surgical tape. Any allergies to these materials should be raised with the experimenter before signing the consent form.

### **Right to withdraw**

The participant has the right to withdraw from the study at any stage without having to give a reason, and to have all or part of the interview excluded from the study.



**Confidentiality and anonymity**

Complete confidentiality and anonymity is guaranteed throughout. Any reference made or excerpts of data included in the final research will have places, names and any other identifying words changed. All audio-recordings will be stored in a locked place, and will be destroyed on completion of the study.

**What will happen to the research?**

The research will form part of a doctoral thesis. Parts or all of the research may be submitted for publication on academic journals.

## Informed Consent Form

# The feeling of emotion across the life-span

## INFORMED CONSENT FORM

(to be completed after Participant Information Sheet has been read)

The purpose and details of this study have been explained to me. I understand that this study is designed to further scientific knowledge and that all procedures have been approved by the Loughborough University Ethical Advisory Committee.

I have read and understood the information sheet and this consent form.

I have had an opportunity to ask questions about my participation.

I understand that I am under no obligation to take part in the study.

I understand that I have the right to withdraw from this study at any stage for any reason, and that I will not be required to explain my reasons for withdrawing.

I understand that all the information I provide will be treated in strict confidence.

I agree to participate in this study.

Your name

---

Your signature

---

Signature of investigator

---

Date

---

## General Health Questionnaire

# General Health Questionnaire

**Following you will be asked various questions about your general health. Please read the instructions and questions carefully before answering.**

We should like to know if you have had any medical complaints and how your health has been in general, over the last few weeks. Please answer ALL the questions simply by circling the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

**It is important that you try to answer ALL the questions.**

Have you recently....

- |   |                    |                     |                        |                      |
|---|--------------------|---------------------|------------------------|----------------------|
| 1. been able to concentrate on whatever you are doing?    | Better than usual  | Same as usual       | Less than usual        | Much less than usual |
| 2. lost much sleep over worry?                            | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 3. felt that you are playing a useful part in things?     | More so than usual | Same as usual       | Less useful than usual | Much less useful     |
| 4. felt capable of making decisions about things?         | More so than usual | Same as usual       | Less so than usual     | Much less than usual |
| 5. felt constantly under strain?                          | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 6. felt you could not overcome your difficulties?         | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 7. been able to enjoy your normal day-to-day activities?  | More so than usual | Same as usual       | Less so than usual     | Much less than usual |
| 8. been able to face up to your problems?                 | More so than usual | Same as usual       | Less so than usual     | Much less able       |
| 9. been feeling unhappy and depressed?                    | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 10. been losing confidence in yourself?                   | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 11. been thinking of yourself as a worthless person?      | Not at all         | No more than usual  | Rather more than usual | Much more than usual |
| 12. been feeling reasonably happy, all things considered? | More so than usual | About same as usual | Less so than usual     | Much less than usual |

Thank you very much for your co-operation

## Health Screen

# HEALTH SCREEN FOR STUDY VOLUNTEERS

P \_\_\_\_\_

It is important that volunteers participating in research studies are currently in good health and have had no significant medical problems in the past. This is to ensure (i) their own continuing well-being and (ii) to avoid the possibility of individual health issues confounding study outcomes.

Please complete this brief questionnaire to confirm fitness to participate:

1. At present, do you have any health problem for which you are:

- |  |     |                          |    |                          |
|--|-----|--------------------------|----|--------------------------|
| (a) on medication, prescribed or otherwise | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (b) attending your general practitioner    | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (c) on a hospital waiting list             | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

2. In the past two years, have you had any illness which require you to:

- |   |     |                          |    |                          |
|---|-----|--------------------------|----|--------------------------|
| (a) consult your GP                         | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (b) attend a hospital outpatient department | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (c) be admitted to hospital                 | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

3. Have you ever had any of the following:

- |   |     |                          |    |                          |
|---|-----|--------------------------|----|--------------------------|
| (a) Convulsions/epilepsy                | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (b) Asthma                              | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (c) Eczema                              | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (d) Diabetes                            | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (e) A blood disorder                    | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (f) Head injury                         | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (g) Digestive problems                  | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (h) Heart problems                      | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (i) Problems with bones or joints       | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (j) Disturbance of balance/coordination | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (k) Numbness in hands or feet           | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (l) Disturbance of vision               | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (m) Ear / hearing problems              | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (n) Thyroid problems                    | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (o) Kidney or liver problems            | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (p) Allergy to nuts                     | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

4. Has any, otherwise healthy, member of your family under the age of 35 died suddenly during or soon after exercise?

- |     |                          |    |                          |
|-----|--------------------------|----|--------------------------|
| Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
|-----|--------------------------|----|--------------------------|

If YES to any question, please describe briefly if you wish (eg to confirm problem was/is short-lived, insignificant or well controlled.) .....

.....

### Additional questions for female participants

- |   |     |                          |    |                          |
|---|-----|--------------------------|----|--------------------------|
| (a) are your periods normal/regular?                  | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (b) are you on "the pill"?                            | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (c) could you be pregnant?                            | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| (d) are you taking hormone replacement therapy (HRT)? | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

Thank you for your cooperation!

# Appendix 5

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## **The Information/Orientation Cognitive Screening (TIOCS)**



# The Information/Orientation Cognitive Screening (TIOCS)

(To be read out)

What is your name	0. Incorrect	___	1. Correct	___
How old are you	0. Incorrect	___	1. Correct	___
What is your date of birth	0. Incorrect	___	1. Correct	___
Where are you right now	0. Incorrect	___	1. Correct	___
What is the address of this place	0. Incorrect	___	1. Correct	___
What is the name of this town	0. Incorrect	___	1. Correct	___
Who is the Prime Minister	0. Incorrect	___	1. Correct	___
Who is the President of the USA	0. Incorrect	___	1. Correct	___
What are the colours of Union Jack	0. Incorrect	___	1. Correct	___
What day is it	0. Incorrect	___	1. Correct	___
What month is it	0. Incorrect	___	1. Correct	___
What year is it	0. Incorrect	___	1. Correct	___

Total calculated from CAPE 1/0 scale \_\_\_\_\_

Classification by cognitive screening:

1. 0-7 Impaired
2. 8-9 Borderline
3. 10-12 Unimpaired

## PANAS and General Questions

# Positive and Negative Affect Schedule

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on average.

Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

Generally I feel interested .....

Generally I feel distressed .....

Generally I feel excited .....

Generally I feel upset .....

Generally I feel strong .....

Generally I feel guilty .....

Generally I feel scared .....

Generally I feel hostile .....

Generally I feel enthusiastic .....

Generally I feel proud .....

Generally I feel irritable .....

Generally I feel alert .....

Generally I feel ashamed .....

Generally I feel inspired .....

Generally I feel nervous .....

Generally I feel determined .....

Generally I feel attentive .....

Generally I feel jittery .....

Generally I feel active .....

Generally I feel afraid .....

\* \* \*

Finally we would like to know the following details about you. Please write or tick as appropriate.

Age \_\_\_\_\_

Gender:      Female       Male

Education: (please tick any qualification you have achieved)

Secondary school                            O-levels                     

GCSE                                            A-levels                     

Bachelor                                            Masters                     

PhD                     

Other (please write) \_\_\_\_\_

Age when you achieved your latest/last qualification \_\_\_\_\_

Thank you very much for your co-operation

\* \* \*

## Interview Protocol

# Interview Protocol

Hello. How are you? Thank you for wanting to participate in this study. Please have a seat and make yourself comfortable. Please read and sign this consent form. I'd like to emphasise that the interview will be audio-recorded and transcribed, and that you will remain anonymous. Also remember, that you can end the interview and looking at the pictures at any time should you want to.

[Participant reads, signs, etc]

Would you mind filling in this health questionnaire as well? It's just questions concerning your health in general over the last few weeks. Please read the instructions carefully before answering.

[Participant fill in questionnaire]

This questionnaire is about how you feel in general. Please read the instructions carefully before answering.

[Participant fill in questionnaire]

[For old age group, read out TIOCS]

Please make yourself comfortable.

Are you happy with everything? Do you have any questions before we begin?

This is the instrument with which I'll measure your physiological response. First I need to attach these two electrodes to your fingers. There will be a small current going through them, but you will not be able to feel it. If you would please wipe your hands first – are you allergic to these wipes? – Also please dry them. Thank you.

[show the participant the SCL on the computer screen]

I'm turning the tape recorder on now. Please try at all times to speak slowly and clearly.

[Turn on tape recorder. Start measuring]

Please sit and relax for a bit. I need to get a baseline before we can start. Could you please close your eyes for me and try to picture a relaxing scene – such as the sea or sunset.

Concentrate on your breathing. Take a deep breath and exhale slowly. Take another deep breath and exhale slowly. When you feel completely relaxed, please open your eyes again.

[Aim for approximately 2 minutes]

Could you please tell me about a typical morning routine, such as getting up and going in to uni/work/shop.

[Aim for appr. 1 min.

When reached 5 min – give instructions for interview]

### **Instructions for Interview**

Let me first tell you a bit about what's going to happen. I'm looking at how emotions are experienced, and to do that I would like you to tell me of an emotional event that you have had. I expect you to do most of the talking here, as you are the one with all the information I need. There is no right or wrong answers, nothing that's irrelevant or too trivial to be told. I simply would like to hear all you have to say about your experience. So, really, all thoughts that spring to mind, that's what I'd like to hear.

I am looking for you to recall and re-experience the emotional event. It takes a lot of concentration on your part, as I want you to recall what happened in detail and describe it to me.

### *Open-Ended Narration*

First I'd like you to sit for a moment, close your eyes if that helps, and think of an emotional event that had some significant impact on you.

[Wait for participant to acknowledge that they are thinking of event]

First could you tell me about the day and what the general context was before the event happened?

And then, what happened? Please tell me everything you can, in as much detail as possible.

[Identify images identify probing strategy]

What is the clearest image you have of it?

What other images do you have?

### *Probing Memory Codes*

I'd like you to relax for a moment and ready yourself for intense concentration. It is important that you concentrate on the images you have.

[Recreate context of specific event].

Now, I want you to close your eyes and take a moment to recall the event and concentrate intensely on the images you have. Concentrate on the image of [what was identified before].

Ask open-ended, framed question.

Request detailed description.

Exhaust image for information not included in narration.

Probe remaining images.



*Probing Concept Codes.*

How would you characterise the emotion you experienced?

How did it feel?

[Ask and show on a card the following questions]

How emotionally intense was the event at the time?

1= no detectable emotion, 7= the most intense experience I have ever had.

How emotionally intense is the event at recall?

1= no detectable emotion, 7= the most intense experience I have ever had.

How emotionally negative was the event at the time?

1= no detectable negative emotion, 7= the most negative experience I have ever had.

How emotionally negative is the event at recall?

1= no detectable negative emotion, 7= the most negative experience I have ever had.

**Close Interview**

Thank you for sharing your memory with me.

[stop SCL measuring]

Now please sit and relax for a bit before we go on to the next part of the study, which is looking at some pictures.

## IAPS Protocol

# IAPS Protocol

Are you still comfortable? Good. I'll just move this screen in front of you. In a moment I will show you a series of pictures of differing nature. Some of these may be very explicit. Please make sure that you look at the screen at all times while the picture shows. After each picture rating scales like these will be shown [show rating scales on paper]. For each picture I would like you to say how you rate it – how pleasant you find it to look at, and how affected you feel when you look at it. First there will be 4 pictures as a trial, just so that you can get a feel for how it all works. After that a blank screen will be shown for a moment, and then the 'real' picture series begin. Are you ok with that? Any questions so far?

First I just need to get a second baseline for your physiological responses, so if you could just sit and relax for a moment. Thank you.

[Start measure and prepare for showing pictures]

Now, the pictures will begin in a moment. Remember, after each picture you will be asked to rate how pleasant and how affected you are. Remember to concentrate on each image and try to experience the content.

[Show picture series]

[Once picture series has ended:]

Thank you for doing this. I just have a few questions regarding the pictures.

1. How would you characterise the negative pictures you saw?
2. How often have you been exposed to this type of pictures?
3. Where would you have seen them?

Thank you.

I'll just remove these electrodes from your fingers – thank you.

I have just one more questionnaire I would like you to answer if that's ok. The first part is about how you generally feel, and the second part has some general questions about yourself. Please read the instructions carefully before you answer.

Thank you.

***End of study***

Thank you for participating in this study. Do you have any questions at all about anything that went on here today?

## Narrative Analysis Procedure

# Narrative Analysis Procedure

Overall question: **Does emotion change across the lifespan?**

*What am I trying to understand? - What are the participants trying to say? - Why are they trying to say that?*

## Phase 1 – descriptive:

**Summary of narrative-** build on structure and content:

Key issues

Sub-plots

## Narrative structure

Threefold classification scheme: progressive, regressive and stable.

Stable/regressive, progressive opportunity, stable/routine.

Narrative tone.

Metaphors.

Images and symbols.

Rhythm – e.g. repeat of phrases such as ‘and then I’

## Narrative content

*Themes:*

How do people construct the emotion?

How do people construct themselves in relation to the emotion?

*Power-relations* – eg power (the desire for agency and independence), love (the desire for connection and dependence) :

How controlling is the emotion?

Who/what controls the emotion?

*Internal states:*

Emotion (e.g. happy, sad, also valence)

Cognition (e.g. thinking, wondering)

Perception (e.g. see, hear)

Physiological (e.g. tired, hungry)

- who experiences it – self or other

## Context:

**Personal** – how narrative draws on the experience of the individual

**Interpersonal and group** – takes into consideration the audience and the co-construction of narrative

**Societal** – considers the broader social narratives which structure everyday accounts

Group-belongings – use of I, me, us vs them, they

The role of the interviewer – looking for confirmation of ‘right’ description of emotion in situation, emphatic confirmation etc.

## Phase 2 – interpretive:

Connect the narrative with the broader theoretical literature that is being used to interpret the story.

# Appendix 10

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## Summary of the Trauma Narratives

# Summary of the Trauma Narratives

## Group 1 – Age group 18-21 years old

**Name:** Stephanie

**Gender:** Female

**Age:** 21 years old

**Story:** Moved to South Africa when she was 8 years old.

**Threefold classification:** Stable

**How long ago:** 13 years

**Summary:** Her mother, a South African, wanted to go back to South Africa. Although her parents were divorced and she lived with her mother, she resented being taken away from her father, and all she knew. She never felt she fitted in there. She returned to the UK when she was 16, and found it hard having two homes so far apart.

**General demeanour during interview:** Throughout most of the interview she seemed relatively unaffected, but when thinking about closing the door to her house and saying goodbye to her father and being scared, she got tears in her eyes.

**Length of story:** 37 min

**Name:** Martin

**Gender:** Male

**Age:** 18 years old

**Story:** Divorce of his parents.

**How long ago:** 2 years ago

**Threefold classification:** Progressive

**Summary:** When he moved from China to the UK, he got a letter from his mother, telling him that she and her father had divorced, and that he had to write a letter to the courts saying with whom he would want to stay.

**General demeanour during interview:** Seemed relatively unaffected.

**Length of story:** 27 min



**Name:** Christopher

**Gender:** Male

**Age:** 19 years old

**Story:** His brother got a brain tumour.

**Threefold classification:** Stable

**How long ago:** 3 years

**Summary:** The brother went for a check up at the doctors, and it was found that he had a non-malignant brain tumour. His operation went well, but it was firstly a shock, secondly scary not to know what would happen. Christopher did not know what he could or should do.

**General demeanour during interview:** He seemed relatively unaffected, as well as given the impression of feeling deeply for his brother.

**Length of story:** 19 min

**Name:** Serena

**Gender:** Female

**Age:** 19 years old

**Story:** Her father forced entry to the house. **Threefold classification:** Progressive

**How long ago:** 7 months

**Summary:** Her father, who had a restraining order, and whom she had not seen for a year, appeared at the house. When trying to shut the door, he forced it open and began taking the furniture. She tried to lock him out again, but he kicked the door in, and chased her around the house. She called the police, and eventually a neighbour took her in. She was very scared and did not know what to do.

**General demeanour during interview:** Tried to make light of the story, laughed several times.

**Length of story:** 17 min

**Name:** Vanessa

**Gender:** Female

**Age:** 20 years old

**Story:** Father nearly drowned in front of her and her sister.

**Threefold classification:** Stable

**How long ago:** 4-5 years ago

**Summary:** When on holiday in Italy she, her sister and her father got swept out to sea and began struggling to get back in. Her father panicked and said he couldn't breathe. She found it a strange situation having to calm a parent down.

**General demeanour during interview:** She seemed calm, but when asked to close her eyes her eyelashes were fluttering, and she seemed caught up in the vision of the scene.

**Length of story:** 17 min

## **Group 2 – Age group 35-50 years old**

**Name:** Jennifer

**Gender:** Female

**Age:** 36 years old

**Story:** Divorce from husband.

**Threefold classification:** Progressive

**How long ago:** 4 years ago

**Summary:** It was before Christmas, and she and her husband had an argument. This led to a split up. Although she does not regret the divorce, she feels guilty that she could not make it work.

**General demeanour during interview:** She half cried when she was talking about feelings of guilt, and being a failure – the black sheep of the family.

**Length of story:** 26 min

**Name:** Fiona

**Gender:** Female

**Age:** 43 years old

**Story:** The birth of her first child.

**Threefold classification:** Regressive

**How long ago:** 18 years ago

**Summary:** She was 3 weeks overdue, and with her husband being in the army she felt pressure to give birth while he was with her on leave. Although the birth in the end went fine, there were so many complications along the way that it left her traumatised.

**General demeanour during interview:** Several times during the interview she had tears in her eyes. When she described how she felt in hospital, after the birth, on her own, feeling unimportant, she tried to suppress her tears, but ended up crying.

**Length of story:** 62 min

**Name:** Kathryn

**Gender:** Female

**Age:** 42 years old

**Story:** Divorce from husband.

**Threefold classification:** Progressive

**How long ago:** 4½ years ago

**Summary:** Millennium Christmas he wanted a divorce, which came out of nowhere.

Later, after the split up, he beat her up in front of their two girls.

**General demeanour during interview:** Seemed unaffected, except when talking about how it affected her children.

**Length of story:** 34 min

**Name:** Kelly

**Gender:** Female

**Age:** 36 years old

**Story:** Divorce from husband.

**Threefold classification:** Stable

**How long ago:** 5 years ago

**Summary:** She decided that she wanted a divorce, for no other reason than she did not feel he was right for her. He stayed in the house, kept trying to get back together, and eventually started drinking. She felt guilty towards him and the children, and relief when he after two years found another woman and moved out.

**General demeanour during interview:** Did not seem too affected, only when talking about her feelings of guilt.

**Length of story:** 25 min

**Name:** Susan

**Gender:** Female

**Age:** 39 years old

**Story:** Her baby stopped breathing.

**Threefold classification:** Stable

**How long ago:** 11 years ago

**Summary:** It was her daughters first birthday, and she had been really difficult all morning. She had a cuddle, and suddenly stopped breathing. In spite of being a nurse, she forgot all she knew, but managed to get help in time.

**General demeanour during interview:** She immediately got tears in her eyes when she began to tell the story.

**Length of story:** 21 min

### **Group 3 – Age group 65+ years old**

**Name:** Dorothy

**Gender:** Female

**Age:** 79 years old

**Story:** Her mother gave her away when she was 2 years old. At 19, they met again.

**Threefold classification:** Progressive

**How long ago:** 60 years ago

**Summary:** She met with her mother, her brother and half sister, but her mother ended up sending her away again.

**General demeanour during interview:** Seemed relatively unaffected.

**Length of story:** 38 min

**Name:** Penelope

**Gender:** Female

**Age:** 75 years old

**Story:** Had daughter whilst being unmarried in the 1950s.

**Threefold classification:** Progressive

**How long ago:** 54 years ago

**Summary:** After she had her daughter, her father threw them out, but her mother helped to get her a little cottage. She raised the daughter on her own, and then got married when her daughter was 15-16 years old. He was violent against her daughter, and in the end they split up.

**General demeanour during interview:** Seemed relatively unaffected when talking about this, only when talking about how lonely she feels now did she seem affected.

**Length of story:** 16 min

**Name:** Alice

**Gender:** Female

**Age:** 65 years old

**Story:** Divorce from her husband.

**Threefold classification:** Regressive

**How long ago:** 14 years ago

**Summary:** Her husband left her for a younger woman. He had an affair with the woman that she did not know about, one of her daughter's friends. She felt worthless and numb. They are still not on speaking terms, and the daughters see them separately.

**General demeanour during interview:** She seemed very affected by it still.

**Length of story:** 25 min

**Name:** Eliza

**Gender:** Female

**Age:** 77 years old

**Story:** The family immigrated to Canada.

**Threefold classification:** Progressive

**How long ago:** 37 years

**Summary:** She, her husband and their daughter went to Canada to work on a farm. It turned out to be dreadful and they moved to the city. Got cleaning jobs, but her boss there made advances, and eventually they returned to the UK.

**General demeanour during interview:** She seemed very positive and laughed a lot.

**Length of story:** 16 min