AN EMPIRICAL AND THEORETICAL INVESTIGATION INTO THE PSYCHOLOGICAL EFFECTS OF WEARING A MASK

MICK COOPER

I hereby declare that this thesis has not
been submitted, either in the same or different form,
to this or any other University for a degree.

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PREFACE

Whilst this thesis is wholly the original work of the author, there are a number of people whose time and support has been instrumental in bringing it about. Particular thanks go to Helen Cruthers, Peter Smith, Philip Dodgson, David Hitchin, and Peter Harris. I would also like to thank all the participants who took part in these studies for their time and enthusiasm.

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SUMMARY

A review of the literature shows that the wearing of a mask has been hypothesised to bring about four main psychological effects: disinhibition, transformation, facilitation of the expression of aspects of the wearer's Self, and various psycho-somatic changes. Several different explanations have been proposed as to why each of these effects come about.

Using theoretical and empirical research, the thesis explores in detail the hypothesis that a mask can disinhibit its wearer, and that this disinhibition comes about because the mask-wearer feels less identifiable. The findings show that a mask can significantly reduces its wearer's feelings of identifiability, and that it can also significantly reduce its wearer's public self-awareness as a consequence of changes in attentional focus. However, the empirical evidence suggests that the mask's disinhibiting effect is limited to situations in which an individual wants to behave in a particular way, but inhibits that behaviour out of a concern with 'mask-able' facets of their public self. Concomitantly, the findings suggest that, if an individual wants to behave in a way for which they require 'mask-able' facets of the public self, then the wearing of a mask may be experienced as inhibiting.

This thesis also examines the hypothesis that a mask can transform its wearer, and that this occurs through the self-attribution process outlined by Kellerman and Laird (1982). The thesis provides strong empirical support for both these hypotheses, showing that the wearing of a mask can make individuals feel less like their usual self and more like the character represented in the mask. However, the empirical evidence suggests that this latter effect only occurs under conditions in which an individual is specifically focused on their masked appearance.

A final chapter discusses the theoretical and applied implications of these findings, with specific reference to the use of masks in therapeutic practice.

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CHAPTER ONE: INTRODUCTION

What is the psychological effect of wearing a mask? This is the question that will be addressed in this thesis. This introduction will define the key terms, discuss the rationale for this study, and present an outline of the thesis.

1.1 DEFINITIONS

1.1.1 'Psychological'

Reber's (1985) Dictionary of Psychology defines 'psychological' as 'Pertaining to psychology...' (p. 591), but goes on to state that 'psychology' 'simply cannot be defined' (p. 593) as it is not one specific 'thing'. For Reber as for Gleitman (1991), however, 'psychology' is primarily understood as a field of inquiry concerned with mental and behavioural phenomena, and such a definition is sufficient for the purposes of this study.

Hence, the theory and research presented in this thesis will be looking at the effects of wearing a mask on an individual's mental state or behaviour. Whilst this does not deny the possibility that the wearing of a mask may have other effects on an individual --- for instance, it may make an individual feel hotter, or it may limit her[1] vision --- these non-psychological effects will not specifically be looked at. The only exception to this is in cases where the non-psychological effects have specific psychological consequences. If, for instance, an individual feels more vulnerable when wearing a mask because her vision is limited, then this process would be considered an appropriate area of inquiry.

1.1.2 'Mask'

As Tooker (1983) notes, the term 'mask' has been used by writers for a number of different referents. Whilst Brigham (1970), for instance, states that 'masks' refer to facial coverings only, Baptiste (1989) argues that the face can be a mask as well, and Lévi-Strauss (1961) proposes that make-up and tattooing should be included

[1] Throughout this thesis, the feminine pronoun will be used to refer to both men and women.

under the definition of 'masks'. There are also significant cultural differences in what is considered a 'mask'. In the U. K., for instance, a mask (as a covering for the face) is generally distinguished from a costume (as a covering for the body); in Africa, 'a mask is the sum total of a costume with all its special trappings and it covers the wearer's whole body' (Lommel, 1972, p.42). It is clear, therefore, that there is no one transcendental signified that can be labelled 'a mask'. Rather, what is considered a mask is dependent on how the term 'mask' is defined within a particular culture, historical epoch, or by a particular individual.

For the purposes of this thesis, the definition of a mask that will be used comes from The New Collins Dictionary and Thesaurus (1987), and is as follows: 'any covering for the whole or a part of the face worn for amusement, protection, disguise, etc.' (p.614). This is similar to a definition provided in The New Encyclopaedia Britannica Macropedia (1995): 'a form of disguise. It is an object that is frequently worn over or in front of the face to hide the identity of a person and by its own features to establish another being' (p.544). It is also similar to a definition provided in The Oxford English Dictionary: 'A covering for the face, worn either as a disguise or for protection' (1995, p.200). However, the definition from The New Collins Dictionary and Thesaurus is slightly preferable in that it allows a little more flexibility as to the specific function of those objects that come under the definition of 'a mask' (see below).

All three definitions share two necessary components: one structural, the other, functional. Structurally, a mask is considered an object which, firstly, covers the face. Hence, by this definition, a birth mark would not be considered a mask as it does not cover the face but is part of the facial tissue. Make-up would also not be considered a mask as it is applied directly to the facial tissue rather than covering over it. Second, a mask is defined as an object which covers the whole, or a (substantial) part, of the face. Hence, an eye patch would not come under this definition of 'a mask' because only a small amount of the face is actually covered. Clearly, there is no exact cut-off point when a facial covering becomes a 'mask', but, intuitively, one might suggest that around a third or a half of an individual's face needs to be covered before a 'covering' becomes a 'mask'. Intuitively, however, whether or not a 'covering' becomes a 'mask' would also seem to depend on which parts of the face are covered. A covering, for instance, which covers just a small part of the ocular regions seems more

likely to be considered a 'mask' than a covering which covers just a small part of the ears or chin. Third, a mask is defined as a structure which covers the face as opposed to other parts of the body. Hence, by this definition, clothing or costumes would not be considered masks in themselves; rather, the part of them that covered the face would be considered the mask.

The second necessary component, according to all three definitions, is that a facial covering is only a mask if it serves a particular range of functions. The Oxford English Dictionary (1995) defines these functions as to 'protect' or 'disguise' its wearer; whilst The New Encyclopaedia Britannica Macropedia (1995) writes that the function of a 'mask' is to hide an individual's identity or establish the existence of another identity. The Collins' (1987) definition also provides a range of possible functions for a 'mask' --- 'amusement', 'protection' and 'disguise' --- but, in adding an 'etc.', does not entirely foreclose what those possible functions might be. This is advantageous for the present study, where it would seem premature to define what the function of a mask is when this is partly the empirical question under investigation. However, from the three definitions above, 'protection', 'disguise' and 'transformation' would seem to be the three prototypical functions that make a facial covering a 'mask'.

1.1.3 'Wearing'

This thesis limits itself to an interest in the psychological effects of wearing a mask, where 'to wear' is defined as: '1. to carry or have (a garment, etc.) on one's person as clothing, ornament, etc.' (The New Collins Dictionary and Thesaurus, 1987, p.1137). Because of this, this thesis will not be looking at the psychological effects of looking at, visualising, or making a mask. This thesis will also not be looking at the psychological effects of particular mask-work practices or particular masks. However, as with the question of the non-psychological effects of wearing a mask, where these non-wearing effects have implications for the psychological effects, then they will be considered appropriate areas of inquiry.

1.2 RATIONALE

What is the value of empirically examining the psychological effect of wearing a mask? Aside from the fact that this is a phenomenon which has yet to be

explored in any systematic or rigorous way (see chapter two), two further reasons can be proposed.

First, there is an applied value, particularly in terms of the mask's application within a clinical setting. In recent years, a growing number of psychotherapists (e.g. Jennings and Minde, 1993) have begun to use masks as a central component of their therapeutic practice. Exploring the psychological effects of wearing a mask, therefore, may serve as an important means of developing an understanding of the mask's efficacy within this environment. If it is found, for instance, that an individual feels less inhibited when she wears a mask, then this could have significant implications for the mask's use as a therapeutic tool.

Aside from psychotherapy, however, the wearing of a mask occurs within a wide variety of other activities. This includes the training of drama students, theatrical performances, professional activities such as surgery or welding, criminal activities, recreational activities such as carnival or 'fancy dress' parties, and sporting activities such as fencing. Findings from this thesis, therefore, could also be of substantial relevance to some or all of these fields. If it is found, for instance, that an individual feels more vulnerable when she is wearing a mask, then this could raise important concerns as to the mask's use in surgery or welding.

A second rationale for studying the psychological effects of wearing a mask is that it may shed some important light on related psychological processes and theories. Wearing a mask is an activity that is not entirely dissimilar from a whole range of other activities: such as dressing up in different clothes, putting on make-up, or wearing a disguise. Hence, it may be possible to generalise the findings from this study across to related phenomenon. Also, in understanding the psychological effects of wearing a mask, it may be possible to evaluate the validity of 'deeper' and more universal theories of human psychological functioning: for instance, the question of whether an individual's physical appearance can affect their psychological state of mind.

1.3 OUTLINE

This thesis begins by mapping out the different hypotheses that have been proposed regarding the psychological effects of wearing a mask. Based on this 'map', the thesis then goes on to explore one particular

effect in more detail: the hypothesis that the mask disinhibits its wearer. General empirical support for this hypothesis is reviewed, and then the thesis goes on to look in detail at one particular explanation for this disinhibiting effect: that the wearing of a mask invokes a state of anonymity. Empirical support for this hypothesised link between mask-wearing, anonymity and disinhibition is reviewed, and, from this, a series of working hypotheses are proposed. These hypotheses are then tested through two empirical studies.

The thesis then goes on to look at the hypothesis that the mask transforms its wearer, and reviews the general empirical evidence in support of this hypothesis. Again, one specific explanation for this effect is explored in more detail --- that the mask transforms its wearer through a process of 'self-attribution' --- and a series of working hypotheses are then proposed. Three empirical studies are conducted to test these hypotheses.

The discussion to the thesis summarises the findings, and discusses their implications with respect to the applied and theoretical rationale for conducting the study.

CHAPTER TWO: THE PSYCHOLOGICAL EFFECT OF WEARING A MASK: A LITERATURE REVIEW

In investigating the psychological effects of wearing a mask, it would seem useful to begin by reviewing those hypotheses that have, to the present date, been proposed. Before doing so, however, a number of preliminary points should be noted.

First, whilst such hypotheses come from a number of different disciplines --- most notably anthropology and ethnography (e.g. Ottenberg, 1985), but also drama and theatrical studies (e.g. Johnson, 1980), dramatherapy (e.g. Jennings, 1991), psychotherapy (e.g. Saigre, 1989), and history (e.g. Castle, 1981) --- psychologists, themselves, have yet to address the question of what happens to an individual, psychologically, when they wear a mask.

Furthermore, of those books, chapters and papers which have been written on the mask, in only two of these is the question of the mask's psychological effect on its wearer the primary concern (Honigman, 1979; Webbers, Stephens and Laughlin, 1983). In the other texts, the hypothesised effects of wearing a mask is either one of several central concerns (e.g. Caillois, 1961); or, more commonly, a supplementary comment or aside to the main, non-psychological, thrust of the text (e.g. Appel, 1982).

There are a number of consequences of these two facts. First, the majority of hypotheses proposed in the literature tend to lack a detailed, critical exposition of the psychological mechanisms outlined. Related to this is a second point: that the hypotheses are rarely embedded within contemporary psychological theorising, but tend to consist of an amalgam of 'intuitive' psychological ideas and premises. Third, the hypotheses are often implicit rather than explicit, and, in some cases, require a substantial degree of interpretation before any meaningful hypotheses emerge. Hence, it is not always possible to identify exactly what it is that a particular author is trying to say. Fourth, as will be seen in chapters three and six, the empirical evidence in support of the various hypotheses tends to be either vague, unreliable, difficult to generalise from, or simply absent. Fifth, there is very little cross-

referencing between the different authors --- again, leading to an amalgam of untested, 'intuitive' ideas about the psychological effects of wearing a mask rather than an in depth body of critical knowledge.

What emerges from this review, therefore, is not a series of well-founded psychological hypotheses that have been subjected to rigorous psychological testing. Rather, what emerges is a pastiche of sometimes-overlapping, sometimes-unrelated ideas about the mask's psychological effect. Such a review, therefore, tells us little about what might 'actually' happen when an individual wears a mask. What it does do, however, is to identify a whole range of hypothesised effects, some of which can then be subjected to a much more rigorous psychological examination. This review, then, serves as a very useful starting point for this thesis, as well as for other researchers who would be interested in examining the psychological effects of wearing a mask.

In attempting to map out the different ideas about the mask's psychological effect, what seems to emerge are four relatively distinct groups of hypotheses, each constellated around a particular hypothesised effect. The first of these hypothesised effects is that the mask disinhibits its wearer, the second that it transforms its wearer, the third that it facilitates the expression of aspects of the wearer's Self, and the fourth that it brings about various psycho-somatic changes in the wearer's state of being. Within each group, however, different authors have proposed different reasons as to why these effects might come about. The structure of this review, therefore, will be to outline the four main hypotheses, and to look at the different explanations that have been proposed to account for each of them.

2.1 DISINHIBITION

One of the most commonly hypothesised consequences of wearing a mask is that it reduces the extent to which an individual inhibits themself. 'Inhibition' is here defined as: 'a restraint on the direct expression of an instinct' (Concise Oxford Dictionary, 1995, p.700) (rather than as a feeling of shame or embarrassment), and 'instinct' is defined as: 'to act without conscious intent' (Concise Oxford Dictionary, 1975, p.705) (rather than in the more biological sense). In other words, those theorists under the heading of 'disinhibition' are proposing that, when an individual wears a mask, they tend to express themselves in a way that is less

restrained by conscious intentions. MacGowan and Rosse (1924), for instance, write, 'When a man puts on a mask he experiences a kind of release from his inhibited and bashful and circumscribed soul' (xii). This hypothesis has been proposed by over twenty-five different authors, including anthropologists and ethnologists (e.g. Gell, 1975), psychotherapists (e.g. Baptiste, 1989), historians (Castle, 1986), specialists in drama and theatrical studies (e.g. Brook, 1981) and eighteenth century social commentators (e.g. Downing, 1726). Exactly how this disinhibition is conceptualised, however, varies from author to author, depending on the author's particular epistemological framework.

For eighteenth century social critics like Downing (1726) and Owen (1750), for instance, embedded within a moralistic theological discourse, this process of disinhibition is primarily described in terms of the disregarding of 'Christian' inhibitions. Consequently, the mask is seen as facilitating the expression of 'Whate'er the Devil and the flesh suggest' (Downing, p.6) --- promiscuity, sodomy, adultery, prostitution and gambling being amongst the 'barefaced Impieties' and 'wickednesses' (Owen, p.18) that the wearing of a mask is considered to elicit.

For those from a more contemporary, psychodynamic perspective, on the other hand, the disinhibiting effect of wearing a mask is described primarily in terms of a suspension of the control mechanisms of the superego, with a subsequent cathexis of the Id (e.g. Castle, 1986). Saigre (1989), for instance, writes that the mask brings about a remarkable short-cut in the client's normal defense systems, encouraging 'massive regression', and putting the wearer directly and almost immediately in touch with the psychotic part of herself.

Castle (1986), on the other hand, describes this masked-cathexis in more libidinal terms. He writes that the eighteenth century masquerades offered its participants a <u>spielraum</u> in which repressed impulses --- such as the desire for pleasure and sexual arousal --- could be acted out safely. Caillois (1962) makes a similar point regarding the European tradition of masked carnivals, which he states involved such libidinal activities as 'indecencies, jostling, provocative laughter, exposed breasts, mimicking buffoonery, a permanent incitement to riot, feasting and excessive talk, noise and movement' (p.131). Like Castle (1986), he argues that these activities served as a 'vital source of release' for the

'decency and prudency that must be observed for the rest of the year' (p.131).

In contrast, for those authors coming from a more humanistic perspective, the mask's disinhibiting effect is described primarily in terms of a liberation of the 'real self' from the socially-constructed 'false self' (e.g. Frost and Yarrow, 1990). This viewpoint has been most famously expressed by Wilde (quoted in Sorrell, 1973) who quipped: 'Man is least himself when he talks in his own person, give him a mask and he will tell the truth' (p.15). Similarly, Fourneret (quoted in Iteanu, 1981) writes: 'At carnival time the man puts a cardboard face on his mask' (p.26).

Along with conceptualising this process of disinhibition in different ways, different authors have provided different explanations as to how this disinhibiting effect comes about.

2.1.1 Anonymity

The most commonly cited explanation for why the mask disinhibits its wearer is related to the reduction in identifiability that the wearing of a mask is thought to bring about (e.g. Emunah, 1994). The basis of this line of thinking is that, in everyday life, individuals tend to inhibit certain behaviours 'Lest it bring Obloquy[2] upon their Name' (Downing, 1726, p.5). When 'cover'd with a Mask from Human View' (Downing, p.5), however, the individual feels less identifiable. Consequently, she feels that there is less likelihood that she will be judged, shamed, ridiculed, spoken ill of, or punished in any other way for her behaviours --- because others do not know that it is she who is performing them. The result of this is that she feels less of a need to stop herself from behaving in ways that she might otherwise inhibit.

With respect to this hypothesis, it should be noted that there is a subtle but significant distinction between those authors who state that the mask disinhibits its wearer because she <u>is</u> less identifiable (e.g. Betson, 1751), and those that state that the mask disinhibits its wearer because she <u>feels</u> less identifiable (Saigre, 1989; Baptiste, 1989). The difference here is that, whilst the former refers to 'actual' levels of identifiability (i.e., how identifiable the mask-wearer is to others),

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[2] 1 'The state of being generally ill spoken of' (<u>Concise Oxford Dictionary</u>, 1995, p.939).

the latter refers to identifiability as subjectively-experienced. The implications of this distinction will be discussed more fully in section 3.2.1.

The hypothesis that the mask disinhibits its wearer by reducing her identifiability is one of the few theories of the mask to be explicitly critiqued within the literature. Crocker (1983), Honigman (1977), Gell (1975) and Ottenberg (1975) all argue that the disinhibited behaviour observed at traditional masked rituals can not be accounted for by the mask-wearer's anonymity, as, 'in a small community where masking occurs with troublesome behaviour, the identity of the maskers is generally known, or will eventually be revealed, to others' (Honigman, p.275). Furthermore, Ottenberg and Gell argue that, whilst the masquerades' (primarily female) audience may express ignorance as to the mask-wearer's identities, this is primarily a feint to 'play along' with the performance, rather than a case of the women actually being deceived. It should be noted, however, that this critique is primarily relevant to the hypothesis that the mask disinhibits its wearer through reducing her 'actual' levels of identifiability, rather than her phenomenologically-experienced levels of identifiability. Again, this will be discussed more fully in section 3.2.1.

2.1.2 'Dramatic License'

A second explanation of the disinhibiting effects of wearing a mask, as proposed by several theorists across the various disciplines (e.g. Gell, 1975), is that the mask confers on its wearer a degree of 'dramatic license'. The basis of this hypothesis is that the mask disinhibits its wearer, not because she believes she is unidentifiable behind her mask, but because she believes that her audience will attribute her behaviour to the mask or the mask-character rather than to herself. In other words, what is being proposed is that the mask-wearer knows that her audience know who she is, but believes that her audience will believe that she has 'become' the character represented in the mask. The consequence of this is that she will feel that she is less likely to be punished, ridiculed, etc. for behaviours that might otherwise invite negative judgements, and is thus more likely to enact those behaviours. As Brook (1981) states, 'you can come right out of your shell' when you are wearing a mask because, 'you know that the person who is looking at you doesn't think it's you' (p.72).

This is the explanation for masked-disinhibition which seems to be most frequent in the anthropological and ethnographic literature. Segy (1952), for example, argues that certain African masks facilitate their wearers' ability to 'confidently' pass laws and enforce rulings, since the judgements they make will be attributed to the ancestral spirits residing in the mask, rather than to themselves. Hence, they need not fear retributions from those that have been 'wronged'. Makarius (1983) makes the same point with regard to masked African executioners: that by 'no longer being themselves' when they perform their act, they can not be retaliated against by the families or supporters of the deceased.

The same line of argument is used to explain disinhibited behaviour during masquerade and carnival. Gell (1975), for instance, argues that the masked 'Cassowary' dancers at the rites of the New Guinean Umeda people can behave in ways that are counter to the culture's norms because the dancer is, 'officially...no longer himself' (p.193). Similarly, Ottenberg (1982) argues that the Afipko masqueraders have license to express their unconscious, Oedipal wishes because, within the Afipko belief-system, they have turned into a spirit, and are therefore not responsible for what they are expressing.

Apart from Brook (1981), however, it is not clear whether these authors are suggesting that the wearing of a mask brings about a state of dramatic license, per se, or whether they are only talking about the effects of very specific masks within very specific cultural contexts. Anthropologists like Segy (1952) and Makarius (1983), for instance, are writing about masks that are worn within a very particular belief system: one in which it is believed that the mask-wearer takes on the spirit of her mask. Hence, it is not clear whether they are saying that there is something intrinsic to the act of wearing a mask which means that the mask-wearer will tend to believe that others will attribute her behaviour to the mask or mask-character; or that, in a culture which believes a mask-wearer is no longer himself, the mask-wearer can take advantage of this and behave in ways that he might otherwise inhibit. Given the limitations of this thesis discussed in section 1.1.3, it is only the former hypothesis that is of immediate interest.

2.1.3 'Dramatic Distance'

The theory of dramatic license leads on to a third explanation for the disinhibiting effect of wearing a mask. This is similar to the above in terms of a dis-

identification with one's behaviours, but is based on internal rather than external regulators of behaviour. The basis of this approach, which in the dramatherapeutic literature is sometimes termed 'dramatic distancing', is the hypothesis that the mask disinhibits its wearer because she feels less personally identified with her behaviour when she is wearing it (e.g. Hiltunen, 1988). That is, when wearing a mask, she feels that her behaviours are the behaviours of an other. The consequence of this is that the mask-wearer feels less need to inhibit the expression of those behaviours that, if fully identified with, she would normally inhibit. This inhibition might normally occur either because the behaviours transgress the standards of the mask-wearer's superego (e.g. Pollaczek and Homefield, 1954); or else, because the mask-wearer is afraid that these behaviours or feelings would be too overwhelming (Landy, 1985), dangerous (Jennings, 1990), or depressing (Jennings) if externalised. In other words, whilst the theory of dramatic license proposes that a masked individual becomes less inhibited because she can say to others, 'it's not me'; the theory of dramatic distance proposes that a disinhibition arises because the individual can say 'it's not me' to herself.

How is it that the mask is hypothesised to bring about this dramatic distance? In the literature, this is not exactly made clear. However, the argument would seem to be along the lines that the mask-wearer experiences the mask as an object which is physically separate from herself: something which is 'not-me' (e.g. Landy, 1984). Hence, behaviours which are performed under the guise of this not-me object tend to be partially associated with it. Physical distance thus becomes psychological distance. This is implicit in the argument by both Landy and Jennings (1993) that the more physically 'not me' an object is --- for instance, a mask held away from the face rather than a close-fitting mask --- the more it is hypothesised to create a 'margin of safety' (Landy) between the individual and that which they are expressing. Napier (1986) also points out that the mask creates a temporal distance between mask-wearer and mask, in that the mask-wearer knows that at some point they can take the mask off from their face.

Whilst Jennings (1990) and other dramatherapists focus on the association of behaviour with a not-self, Pollackzek and Homefield (1954) focus on the other side of this coin: the dis-association of behaviour with a 'self'. They write: 'Hidden behind a false face somehow gives the wearer an illusion that he himself is covered and,

therefore, that his ego is not responsible for the antics of the new character' (p.299). Here, they seem to be suggesting that the individual associates, to some degree at least, aspects of her-self with her face (an argument that will re-emerge throughout this thesis). Hence, when the individual's face is hidden, she feels that she, too, has 'stepped back' from the world, and that her behaviours are therefore not associated with who she really is.

2.1.4 'Container'

A fourth explanation for the disinhibiting effects of the mask is that it acts as a 'container' (e.g. Ives, 1994). Jennings and Minde (1993), for instance, write that the mask is, 'especially a safe container of the "self that is dangerous" or the "self that feels dangerous"' (pp. 189-190); whilst Saigre (1989) writes that the mask acts as a 'container' for the psychotic and regressed parts of the self. Unfortunately, neither of these authors specify more precisely what they mean by the term 'container', though Jennings and Minde relate it to the work of Winnicott, as does Ives, who seems to use the terms 'container' and 'transitional object' interchangeably. Winnicott (1971) defines the latter as: 'an intermediate area of experiencing, to which inner reality and external life both contribute' (p.3). In this respect, the argument that the mask functions as a container is not altogether different from the argument that it creates a dramatic distance between the mask-wearer and their mask. That is, a 'third space' in which the mask-wearer can express aspects of themselves in a way that is also 'not themselves'.

However, implicit within the concept of a 'container', particularly at a metaphorical level, is also the idea of 'boundaries' and 'borders': that a container is a vessel which can 'hold' something safely. In this respect, the argument that the mask allows the individual to express more 'dangerous' material because of its ability to 'contain' approximates the argument by Frost and Yarrow (1990) that the mask creates a sense of safety by providing a 'format' into which a character can emerge. In both cases, what seems to be being proposed is that the mask allows its wearer to behave in a less inhibited manner because it provides her with well-defined (character) boundaries, such that she is less afraid that the behaviours she enacts will become chaotic and out-of-control, as they might do if she enacted them in a more form-less, unmasked state.

2.1.5 Increase in Facial Expressiveness

A fifth hypothesis as to why the mask disinhibits its wearer, proposed independently by both Brook (1981) and Sturtevant (1983), is based on the assumption that, in everyday life, individuals tend to inhibit their levels of facial expressions for fear of ridicule or embarrassment. With their facial expressions hidden behind a mask, however, Brook and Sturtevant argue that individuals will feel less concerned with how others judge their facial expressions, and hence will be able to break out of their narrow physiognomic repertoire. Sturtevant thus concludes that the 'mask frees the wearer to behave in an unusual manner' (p.44). However, it is not clear whether this 'unusual manner' is just unusual facial expressions, or whether Brook or Sturtevant see this physiognomic liberation as having a more generalised disinhibitory effect.

2.1.6 Reduction in Concern About Facial Vulnerability

A sixth, and somewhat related explanation for the disinhibiting effects of wearing a mask is proposed by MacGowan and Rosse (1924). They put forward the following argument: human beings, in their natural, unmasked state, are aware that others can see their 'sensitivities' 'betrayed' by their facial expressions, and this leads to a certain anxiety about appearing vulnerable. MacGowan and Rosse are not exactly clear what these 'sensitivities' are, but it would seem that they are referring to the sort of moments when one's face 'looks' nervous or uncomfortable, or when one's blushing or unsteady gaze betrays one's embarrassment.

In wearing a mask, however, MacGowan and Rosse (1924) assert that, 'The sensitive jelly of his [the mask wearer's] face is no longer exposed to rude and galling estimate. He is suddenly free of self, hesitant, weak or blustering' (p.55). In this, MacGowan and Rosse seem to be arguing that, in covering her face, the mask-wearer is relieved of her anxiety that her facial expressions will betray her 'true' state of being: her 'hesitancy', 'weaknesses', or 'blusteringness'. Hence, those behaviours that the individual might normally inhibit for fear of appearing hesitant, weak, etc., no longer require inhibiting, and the individual thus behaves in a more disinhibited way.

2.1.7 Pre-civilised appearance

A seventh explanation for the disinhibiting effect of wearing a mask, as proposed independently by both Bihalji-Merin (1971) and Saigre (1989), is based on the premise that the mask has a primitive and pre-civilised appearance. Saigre refers to the mask as one of humankind's earliest attempts to relate to their origins. Hence, in wearing a mask, both authors propose that the individual is liberated from her inhibitions because she is returned (presumably through a process of associations) to a pre-civilised and pre-inhibited 'deeper strata of existence' (Bihalji-Merin).

As with the theory of dramatic license, however, it is not clear whether what is being proposed here is a process that is relevant to all masks --- i.e. that masks, per se, are primitive in nature --- or whether it is only referring to the psychological effects of specific masks: i.e. those which are 'primitive' or 'pre-civilized' in appearance. Would these authors, for instance, predict that a futuristic mask would have the same pre-civlizing effect?

2.1.8 Protection

An eighth explanation for the disinhibiting effect of wearing a mask, as proposed by Saigre (1989), is that the physical protection afforded by the mask gives the wearer an illusion that she is also psychologically protected. In other words, because she feels that her face can not be physically hurt by the external world, she also feels that she can not be psychologically hurt by others, and is hence less concerned with inhibiting her behaviour such that she will earn the approval --- and avoid the condemnation --- of others.

2.1.9 Transformation

A final explanation for the disinhibiting effect of the mask is based on the second of the four superordinate hypotheses: that the mask transforms its wearer, specifically, her sense of personal identity. Honigman (1977) proposes that a sense of 'responsibility for acts' and social morality is integral to an individual's concept of self. Hence, when an individual loses their self-identity through wearing a mask, they also lose, according to Honigman, their sense of personal responsibility and concern with behavioural conventions. Hence, he argues that they are more likely to behave in a disinhibited manner.

2.2 TRANSFORMATION

A second group of hypotheses regarding the psychological effects of wearing a mask have been constellated under the superordinate term 'transformation', where 'to transform' is defined as to 'make a thorough or dramatic change in the form, outward appearance, character, etc. of' (Concise Oxford Dictionary, 1995, p.1481). In other words, what the authors grouped under this heading are proposing is that the wearing of a mask alters the distinguishing qualities or characteristics of the mask-wearer, such as her sense of identity, behavioural patterns or affective state.

The defining terms 'thorough' and 'dramatic' are of importance here, because what these authors are suggesting is not simply that the mask brings about superficial changes, such as minor behavioural modifications or the playing-out of a different role. Rather, what is being proposed is that the wearing of a mask brings about substantial changes in the mask-wearer's behaviour, cognitions, affect, or phenomenological-experiencing. Frost and Yarrow (1990), for instance, write that the mask 'annihilates' its wearer's sense of self; whilst Kerényi (1948) states that a mask 'penetrates' down into its wearer's very soul.

As with the hypothesis that the mask disinhibits its wearer, the hypothesis that the mask transforms its wearer has been advocated by over 25 different theorists, from a wide variety of disciplines. This includes anthropologists and ethnographists (e.g. Lévi-Strauss, 1961), writers on drama and theatrical studies (e.g. Copeau, quoted in Sorrell, 1973), and psychotherapists (e.g. Brigham, 1970).

The hypothesis that the mask transforms its wearer is not mutually exclusive from the hypothesis that the mask disinhibits its wearer. Indeed, as discussed in section 2.1.9, it has been argued that masked-transformation is one of the precursors to masked-disinhibition. Also, many of the authors who hypothesise that a mask disinhibits its wearer also propose that the mask transforms its wearer (e.g. Segy, 1952). Indeed, to some extent, the former can be understood as a subset of the latter: to become disinhibited is to experience some form of change. Yet the reverse is not equally true: that to be transformed is necessarily to become less inhibited. An individual, for instance, might transform into a person who acts in a more inhibited and self-conscious manner.

Furthermore, as the Concise Oxford Dictionary (1995) definition suggests, when one talks about transformation, one tends to be talking about a change in the distinctive qualities or characteristics of something. Hence, if one talks about an individual 'transforming', there is the implication that their distinctive 'personality' is changing, or that their characteristic behavioural, affective, or cognitive styles are undergoing an alteration. Disinhibition is somewhat different to this, because here there is no implication of something distinctive or characteristic being changed. When an individual experiences a reduction in levels of inhibition, they are no less the distinctive individual that they were before. They are simply the same person with the same characteristic qualities, but with more scope to express themselves. In this sense, the concept of transformation can, perhaps, be seen as involving a more holistic change, whilst the change involved in disinhibition is more uni-dimensional and linear in nature.

In terms of distinguishing between these two superordinate theories, it should also be noted that some advocates of the mask-as-transformer hypothesis have been critical of the assumption that the mask disguises its wearer and thus disinhibits her. Kerényi (1948) was perhaps the most notable of these, arguing that self-concealment was a 'secondary' and historically 'degenerative' function of the mask --- in contrast to its transformative function. Larsen and Larsen (1981) as well as Lommel (1972) also criticise what they consider the 'modern attitude' of the 'mask-as-concealer'.

As with disinhibition, there are two sides to the process of transformation: the loss of what was, and the acquisition of something new. Hence, it has been hypothesised that the wearing of a mask brings about an attenuation of one's previous self/identity (e.g. Honigman, 1977), social identity (Lévi-Strauss, 1961), ego (e.g. Jennings, 1993), personality (e.g. Johnson, 1981), 'subjectivity' (Brook, 1981), and behaviour (Benda, 1944). On the other side of the coin, it has been hypothesised that the wearing of a mask leads to the acquisition of new identities (e.g. Brigham, 1970), subjective feelings (e.g. Caillois, 1962), personalities (Copeau, quoted in Sorrell, 1973), 'whole psychologies' (Stanislawski, 1968) 'voices' (Copeau), behaviours (e.g. Pollaczek and Homefield, 1954), and metaphysical entities (e.g. Eliade, 1964). This latter belief --- that the mask-wearer acquires the spiritual identity or 'energy'

of the mask --- is also held by numerous traditional cultures (see, for instance, Blau, 1966).

The distinction, between transformation as a loss of what was, and transformation as an acquisition of something new, is an important one, as the existence of one of these processes does not necessarily imply the existence of the other. Honigman (1977) and Lévi-Strauss (1961), for instance, hypothesise that an individual may lose their sense of self or identity, but they do not go on from this to suggest that the mask-wearer will therefore adopt the characteristics of the mask. Lévi-Strauss simply states that the mask-wearer will become an 'anonymous being' --- though one might argue that this is a form of identity in itself.

Furthermore, several authors have argued that the mask can facilitate the emergence of something 'new' without necessarily eliminating that which previously existed. In this respect, Kerényi (1946) and others have argued that the mask is capable of bringing about a state of 'co-existence', or what Cole (1985) terms 'dissociation'. This hypothesised state is one in which the pre-masked self or ego has an opportunity to encounter and engage with the 'being' that has emerged through the wearing of a mask.

Kerényi (1948) was the first theorist to put forward this hypothesis. He argued that the primary function of the mask was not just as an instrument of transformation, but as an instrument of <u>unifying</u> transformation. He believed that it 'nullified' the boundaries between self and not-self, and 'fused' the wearer with aspects of both the extra- and intra-psychological life-world that have been, 'hidden, forgotten and disregarded' (p.153).

In recent years, dramatherapists have also emphasised the mask's capacity to achieve this 'balance of distance' (e.g. Jennings, 1993), in which a client can express new behaviour patterns or new 'selves' through the mask, but in such a way that their original self is not entirely annihilated. In other words, it is hypothesised that the mask can bring about a 'partial' or 'controlled' transformation. This is related to the hypothesis outlined in section 2.1.3, that the mask disinhibits its wearer through providing the mask-wearer with some dramatic distance from their behaviours. However, what dramatherapists like Jennings go on to argue is that, although the mask-wearer may experience their transformed masked behaviour as that of an other, in fact the behaviour and emotions expressed through the mask are

projections of the mask-wearer's own self. Hence, the mask allows the wearer to witness and reflect on projected aspects of their Being.

Landy (1984) conceptualises this 'self-witnessing' in a somewhat different direction. He writes that a mask-wearer has an opportunity to adopt the more 'distanced, elevated, and aestheticized' (p.86) position of a masked being. Hence, she has an opportunity to stand back, and witness the behaviour and characteristics of the unmasked self.

As with the question of what it is that is expressed through the process of disinhibition, the question of what it is that is expressed through the process of transformation is answered in many different ways, depending on the theorists' particular epistemological, ontic and theological assumptions. For those theorists whose belief systems are primarily metaphysical, or open to metaphysics --- and this includes virtually all traditional cultures that use masks --- the mask is seen as transforming its wearer into something which is entirely outside of her everyday self-system (e.g. Johnson, 1980). Rudlin (1994), for instance, writes of 'a possessing spirit' arriving through the mask which has needs of its own, such as wanting to be kept on rather than returned to the 'limbo of suspended animation' (p.40).

As with Jennings (1993) and Landy (1984), however, for many others authors (e.g. Larsen and Larsen, 1981) the transformation that the mask is hypothesised to bring about is not so much from self to other, as from the everyday self to the more hidden aspects of the Self (in the Jungian sense of the word). Much of this, indeed, does come from a Jungian perspective, and Jenkins (1983), amongst others, writes that the transformation invoked by a mask facilitates the expression of archetypal elements of the collective unconscious. Several other authors (e.g. Taylor, 1983) talk of the transformation bringing out less collective elements of the personal unconscious: such as subpersonalities, alternate identities and ego-states.

It should be noted, however, that what is being proposed at this point is not necessarily that the wearing of a mask directly facilitates the expression of these extra-psychic, intra-psychic or temporal aspect of Being. Rather, what is being proposed is that the mask transforms its wearer, and that in this process of transformation, certain aspects of Being are expressed.

Those authors who specifically draw a link between the wearing of a mask and the expression of particular aspects of the Self will be discussed separately in section 2.3.

Along with different ideas regarding what it is that is transformed when an individual wears a mask, there are also different ideas about the extent to which a mask transforms its wearer.

At one end of the spectrum, there are those authors who conceptualise the wearing of a mask as sufficient, in itself, to bring about an immediate and dramatic transformation. Copeau (quoted in Sorrell, 1973), for instance, states that:

> The actor who performs under a mask receives from this papier-mâché object the reality of his part. He is controlled by it and has to obey it unreservedly. Hardly has he put it on when he feels a new being flowing into himself, a being the existence of which he had before never even suspected. It is not only his face that has changed, it is all his personality, it is the very nature of his reactions, so that he experiences emotions he could never have felt nor feigned without its aid. If he is a dancer, the whole style of his dance, if he is an actor, the very tone of his voice, will be dictated by this mask...a being, without life till he adopts it, which comes from without to seize upon him and proceeds to substitute itself for him. (pp.64-5)

Similarly, Brook (1981) states that the mask 'absolutely' (p.68) acts as a transforming agent, giving the example of a ferocious Balinese demon mask, which, when used in rehearsals, let loose on those who had just tried it on a feeling of 'incredible forces'.

More to the middle of the spectrum are those authors who, in describing specific mechanisms whereby the mask transforms its wearer, would also seem to be suggesting that the wearing of a mask has the capacity to bring about a transformation (e.g. Stanislawski, 1968). However, in contrast to authors such as Benda (1944) or Copeau (quoted in Sorrell, 1973), these authors describe the mask's power to transform in more qualified terms, and there is less emphasis on the extremity or the immediacy of the changes that the wearing of a mask brings about. Also, these authors tend to describe the transformative effect of wearing a mask within the context of many related factors, some of which are seen as being necessary for a masked transformation to occur.

Johnson's (1981) writings are a good example of this middle position. Johnson states that the mask is a device for 'driving' the mask-wearer's personality out of her body, and provides an explanation for why this might be the case (see section 2.3.1). In this, it would seem that he is hypothesising that the wearing of a mask makes a very specific contribution to the transformative process. Yet in also talking about times when the mask is 'switched on' and 'switched off', it would seem that he is not taking the position that a mask will always transform its wearer whatever the context. Rather, in talking about mask-wearing in the context of different mask-work techniques (e.g. looking at one's masked face in a mirror), it would seem that he is saying that there are a number of different factors which contribute to the transformative effect of wearing a mask. Wearing a mask, on its own, does not seem to be considered sufficient to bring this effect about.

At the furthest end of the spectrum are those authors who, again, outline a specific mechanism by which the mask may transform its wearer. However, the contextualised nature of this effect is increasingly emphasised; or else there is an implicit or explicit challenge to the hypothesis that the wearing of a mask, alone, is sufficient to bring about an immediate and dramatic transformation. Cole (1985), for instance, makes the point that, for the mask to transform its wearer in a ritual context, appropriate ritual preparation and costuming are also required. Similarly, Frost and Yarrow (1990) state that the 'power to change is not in the mask' (p.125), but derives from a complex interaction between the mask, the mask-wearer, and the audience to whom they are performing.

Caillois (1962) also views the transformative effect of mask-wearing within the context of a complex dialectical process that takes in many non-mask factors. He writes that the mask 'permits' the wearer to transform, indicating that he sees it as playing some role in facilitating the transformational process (see section 2.2.6). Yet at the same time, in direct contrast to the views of Benda (1944) or Copeau (quoted in Sorrell, 1973), Caillois states that 'No doubt the wearer of the mask is not deceived at the beginning' (p.95): i.e. she does not immediately transform into the character of the mask. Rather, Caillois argues that the transformation develops as the mask-wearer becomes increasingly 'enthralled' and 'abandoned' to his own mimicry, believing more and more fervently that he is indeed the

god as whom he has disguised himself. In this respect, Caillois is not arguing that the wearing of a mask is sufficient to transform its wearer. Rather, he seems to be arguing that it is the mimicry which is responsible for this transformation. The mask only serves to permit this transformation to occur --- it does not cause it.

Ottenberg (1975) also challenges the notion of a direct causal relationship from mask-wearing to transformation. He states that 'if one puts on a certain type of mask, one is not usually expected to wear a certain form of costume and behave in certain ways; rather, if one wishes to act in a particular way, then a specific costume and mask are appropriate' (1975, p.12). In this respect, Ottenberg would seem to be suggesting that it is not the wearing of a mask that leads an individual to transform. Rather, it is the desire to transform which leads an individual to wear a particular mask, an activity that may then facilitate the transformational process.

Finally, there are those writers who, whilst talking about a relationship between transformation and mask-wearing, are difficult to place anywhere on this spectrum, and, indeed, may not be located on it at all (e.g. Lommel, 1972). This is because, though they write about masks bringing about a transformative effect, they do so in relation to specific masks, specific practices or specific contexts. And, because they do not specify a mechanism whereby a mask, in general, might transform its wearer, it is not clear what they see as the role of mask-wearing, per se, in this transformative process.

With respect to the degree of transformation, a number of authors have also suggested a relationship between masking and the invocation of altered states of consciousness. This includes trance (e.g. Johnson, 1981), hypnosis (Frost and Yarrow, 1990), possession (e.g. Cole, 1985), or channelling (Maude-Roxby, 1994). In this altered state, it has been suggested by Johnson, Caillois (1962) and Osbourne (1971) that the mask-wearer may experience amnesia, heightened and altered visual perceptions (such as brighter and more intense colours), hallucinations, mental anaesthesia, vivid dreams and somnambulism, 'seizures', 'paroxysms', compulsive behaviour, and heightened or altered physical sensations (such as the ability to withstand extremely cold temperatures).

It is only really Copeau (quoted in Sorrell, 1973), however, who talks about the wearing of a mask as sufficient, in itself, to bring about an altered state of

consciousness. Writers like Osbourne (1971) or Caillois (1962), on the other hand, write about mask-wearing as just one amongst a number of factors, such as behavioural mimicry or particular mask-work practices, which can, over time, lead to a state of being akin to that of trance or possession. It should be noted, however, that for writers like Johnson (1980) and Rudlin (1994), what is necessary for the wearing of a mask to induce an altered state of consciousness is not so much the presence of something, as the absence of something: conscious, deliberate control.

With respect to the question of 'how much' a mask transforms its wearer, Jennings (1993) introduces a number of intervening variables. First, is the type of mask worn. She argues that individuals are more likely to become immersed in a mask-character if they are wearing a 'second skin' mask rather than a physically distanced one, such as a mask held over the face on a stick. (Given, however, that Jennings hypothesises that the latter will provide its wearer with more dramatic distance [see section 2.1.3], this would seem to challenge Honigman's (1977) assertion that there is a positive relationship between degrees of disinhibition and degrees of transformation [see section 2.1.9]). Second, Jennings suggests that different individuals will be transformed by wearing a mask to different extents. More specifically, she argues that individuals with a clear sense of their own ego are more likely to allow themselves to be transformed by the mask than those with a less certain sense of self.

As with disinhibition, a number of different explanations have been proposed for why a mask might transform its wearer.

2.2.1 Non-physiological Transformations of the 'Face'

The most frequent explanation relates to the fact that a mask changes its wearer's 'facial'[3] appearance (e.g.

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[3] As a convention, the terms 'face' or 'facial', in quotation marks, will be used throughout this thesis to denote the visual appearance of the facial region (as viewed from the vantage point of an observer). This should be contrasted with face or facial appearance, without quotation marks, which will be used to denote the actual physiognomic constitution or appearance of an individual's face. Hence, the wearing of a mask will alter an individual's 'facial' appearance, but it will not necessarily alter an individual's facial appearance.

Honigman, 1977). This is not an actual, physiological changes in the wearer's face: e.g. increased smiling in mimicry of a smiling mask. Rather, it is a change in how the 'face' looks or appears from the vantage point of an observer. In other words, what is being proposed is that, when an individual wear a mask, they start to see their mask as their 'face'. This transformation in physical self-perception then brings about a transformation in psychological self-perception.

The argument that changes in 'facial' appearance can bring about psychological changes is based on the assumption that the face is the personality's 'most immediate mise-en-scène' (Tonkin, 1979, p.241). Honigman (1977) writes: 'human individuality is felt to be centred in the face', and that 'the face constitutes an anchorage point of identity, especially personal identity' (p.277). Hence, when an individual's face is concealed by a mask, it is argued that this brings about a 'little death' (Tonkin) of the wearer's personality, or her personal identity. Because the central symbol of who she is has been hidden, the mask-wearer feels that she is no longer her-self.

Brook (1981) presents a slight variation of this argument, focusing more on the loss of facial expressions than facial identity. He writes that, when an individual is masked, she loses her ability to communicate and 'defend' herself with her everyday facial expressions. Hence, she loses her 'subjectivity'. Unfortunately, Brook does not specify more precisely what he means by this 'subjectivity'.

Concomitantly, Johnson (1981) argues that once the individual acquires a new 'face', so the 'spirit' associated with that 'face' takes possession of the body. Based on this principle, Johnson encourages his students to look at their masked selves in a mirror when their character begins to fade, as a means of 'recharging' their new identity.

Clearly, there are parallels between the argument presented here and the arguments presented in section 2.1.3 regarding dramatic distancing. Both emphasise a disjoining between the individual's behaviour and their everyday ego or self-construct, and both emphasise the relationship between facial appearance and sense of self. The primary difference, however, is that the hypothesis discussed here postulates a transformation that is primarily diachronic, whilst the dramatic distancing hypothesis postulates a transformation that is primarily

synchronic. In other words, with dramatic distance --- particularly where the mask is a physically distanced one rather than a close fitting one --- it is argued that the mask-wearer feels that they are themselves, but their behaviour is that of an other. By contrast, in the theory of 'facial transformation', not only the behaviour but also the sense of self becomes temporarily disconnected or transformed from the initial sense of self.

This would explain both the difference between Jennings' (1993) and Honigman's (1977) view of the relationship between disinhibition and transformation, and the reason why these two hypotheses are not necessarily incompatible. In the Jennings model, the sense of 'I' is synchronically split from the behaviour, and therefore the individual feels free to behave in a disinhibited way. In the Honigman model, on the other hand, the sense of 'I' is diachronically split from previous concepts of 'I', and therefore the individual experiences a freedom to behave in a way that is unconstrained by previous moralities. Both forms of transformation, therefore, may have the possibility of reducing the wearer's levels of inhibitions. Indeed, perhaps one could suggest that the relationship between transformation and disinhibition is somewhat 'U'-shaped, with high degrees of disinhibition at both very high levels and very low levels of masked-transformation.

2.2.2 Physiological Transformations of the Face

Another explanation for masked-transformation, based on physiological changes in the face rather than non-physiological changes in the 'face', is implicit in an observation made by Sturtevant (1983). He relates a story, told to him by one of his Iroquois informants, about a man whose False Face mask fell off whilst he was dancing. Reports the informant, 'He was making the awfullest face behind there. I guess he was thinking about how he was looking or something' (p.44). From this anecdote, one might hypothesise the following: that when an individual wears a mask, they mimic the 'face' of the mask with their own face. This might then be hypothesised to bring about a more general psychological transformation.

2.2.3 'Unconscious' Transformation

Benda (1944) proposes a third hypothesis as to why a mask might transform its wearer. He writes that the mask-wearer is 'automatically' and 'unconsciously' drawn to behave in a way that emulates the being in his mask.

Unfortunately, Benda does not specify more precisely the nature of this process, or how the wearing of a mask might bring it about.

2.2.4 'Motors' of the Mask

Frost and Yarrow (1990) and Maude-Roxby (1994) propose a fourth reason why an individual might feel transformed by wearing a mask. They argue that the physical presence of a mask requires the wearer to change their behaviour. Having to look through the small space of the eye-holes, for instance, may mean that the mask-wearer has to move her head differently. Alternatively, the pressure from the nose or mouth of the mask may have an effect on the wearer's voice. Maude-Roxby refers to these changes as the 'motors' of the mask, because these initial transformations in behaviour may then lead on to other psychological changes. If an individual has to constantly dart her head around to see, for instance, then she may start feeling like a 'bird-like', 'beaky' character.

2.2.5 Observer Feedback

A fifth argument, as proposed by Maude-Roxby (1994) (and implicit in the writings of Frost and Yarrow, 1990), is that the mask transforms its wearer through the feedback that she receives from her audience. Maude-Roxby states that 'something else' takes hold of the mask-wearer because the audience sees them differently. That is, an audience responds to a mask-wearer in a particular way, and the feedback that they give her --- e.g. laughter, surprise, cheers, horror --- will have a shaping effect on her behaviour.

Maude-Roxby (1994), however, does not specify the exact process by which the mask-wearer is transformed as a consequence of her audiences' responses. Also, such an explanation for the process of transformation would only be applicable to those contexts in which an audience was actually present. Furthermore, such a process would only occur to the extent that an audience actually perceived and responded to someone in a different way as a consequence of that person wearing a mask.

2.2.6 Disinhibition

A final explanation for the mask's ability to transform its wearer is based on the hypothesis of the previous section: that the mask disinhibits its wearer. This argument is most clearly put forward by Pollaczek and Homefield (1954). They state that, because the mask-wearer feels less inhibited, they will feel more able to

try out new roles. These are roles that, without the mask on, they might feel too inhibited to act out. Caillois (1962) puts forward a similar argument when he suggests that masked-anonymity allows an individual to 'let go' and 'become' a God-like character without fear of social castigation.

2.3 FACILITATING THE EXPRESSION OF 'ASPECTS OF THE SELF'

A third cluster of hypotheses revolve around the proposition that the mask is capable of directly eliciting --- or facilitating the expression of --- 'aspects of the Self'. 'Self' is used here is the wider, Jungian sense, defined as, 'the psychic totality of the human being which transcends consciousness' (Jung and Von Franz, 1980, p98). These aspects include archetypes (e.g. Webber, Stephens and Laughlin, 1983); subpersonalities (e.g. Larsen, 1990); private personas, fantasies, attitudes and personal dynamics (Fryrear and Stephens, 1988); transferential material (Saigre, 1989); or particular modes of relating to the world (Gersie, 1994).

2.3.1 Projection

The most frequent explanation as to why the wearing of a mask facilitates this process is based on the notion of 'projection' (e.g. Landy, 1984). Rycroft (1995) defines projection as 'the process by which specific impulses, wishes, aspects of the self or internal objects are imagined to be located in some object external to oneself' (p.139). Hence, the hypothesis that an individual projects aspects of her Self on to a mask, as a constitutive activity, is similar to the basic premise underlying the use of projective tests. Indeed, Fryrear and Stephens (1988) state that: 'Just as one projects one's fantasies, attitudes, and personal dynamics into such stimuli as Rorschach ink blots and Thematic Apperception plates, so too does one project onto a mask' (p.227). However, Fryrear and Stephens seems to be talking here primarily about the making of masks, and it is only Hiltunen (1988) who specifically writes that this projection occurs during the wearing component of therapeutic mask-work: when the individual first confronts her masked image in the mirror.

2.3.2 Mask as Symbol

A second series of explanations as to why the mask might specifically facilitate the expression of 'aspects of the

Self' are grouped around its symbolic potential. Larsen and Larsen (1981) argue that the mask, as an image reminiscent of one of the most evocative and primary of human images --- the face --- has the ability to elicit archetypal forces that are beyond the reach of the spoken word.

Webber et al (1983) also argue that the mask can access 'specific archaic modes of behaviour and experience' (p.212), basing their analysis on MacLean's (1973) concept of the 'triune brain': consisting of neo-cortex, limbic systems and reptilian core. The authors argue that masks, as external symbols that may have acquired an 'extensive evocative field' ('outer SYMBOLS' [capitals as per original]), are not only duplicated within the psyche at a phenomenologically salient, neo-cortex level ('inner SYMBOLS'), but also have a capacity to penetrate deep into the more genetically primitive parts of the brain --- the limbic and reptilian core --- evoking 'core SYMBOLS' or archetypes. Thus, through this process of 'symbolic penetration', they argue that the mask links together both the recent and archaic parts of the brain, 'resulting in changes of psycho-physiological balance, leading to alterations in understanding and behaviour' (p.211). However, Webber et al do not make it clear whether they are referring to masks per se, or only those masks which have, 'universal cognizance and are recognised in ritually delineated clusters' (p.211). If it is primarily the latter, then it is the universal cognizance of an object that determines its symbolic penetrative potential rather than its 'mask-ness'.

Like Larsen and Larsen (1981), however, Cooper and Cruthers (1999) do argue that there are certain features inherent to the mask which makes it particularly effective at facilitating the expression of aspects of the Self --- in this case, subpersonalities. Their argument is based on the assertion that there are a number of shared features between masks and subpersonalities, such that the former may be a particularly effective starting point around which related aspects of a subpersonality-complex can be constellated. First, they argue that a mask lacks the multidimensionality of the human face, just as subpersonalities lack the multidimensionality of the human personality. Second, they argue that the mask is fixed, and hence parallels the fixedness of subpersonalities. Third, they argue that the mask covers the real face in the same way that some psychotherapies (e.g. psychosynthesis) believe that the subpersonalities serve to cover the 'real self'.

For Gersie (1994), the symbolic potential of the mask is derived from the fact that it 'freezes' the face. Hence, she argues that the wearing of a mask triggers the expression of 'frozen', 'stultified', 'unified' ways of relating to the world. Gersie refers to these modes of being as 'intensification experience', in which the individual is engulfed in an emotional state with little or no ability to stand back from and reflect on that feeling. Gersie goes on to suggest that this intensificatory experience is not just unique to the moment, but is related to particular, previously experienced intensification experiences, in which the memories, sensations and feelings associated with that moment are activated.

2.4 PSYCHO-SOMATIC CHANGES

A final body of hypotheses can be clustered under the term 'psycho-somatic'. These are hypotheses of a less psychological and more physiological nature, which propose certain psychological changes as a consequence of the mask's effect on its wearer's physicality or means of communication.

2.4.1 Reduction in Facial Expression

The first cluster of psycho-somatic hypotheses are based on the fact that the mask occludes the face, and hence decreases --- to the point where it may entirely disrupt --- the individual's ability to communicate facially. Some authors have suggested that this will augment the individual's awareness of their body (Brook, 1981), increase their physical expressivity (e.g. Emunah, 1994), or change their physicality in some unspecified way (e.g. Gersie, 1994). Others have been more specific. Ottenberg (1982), for instance, hypothesises that this facial occlusion reduces the individual's ability to communicate emotions, whilst Goldoni (quoted in Sorrell, 1973) extends this to a reduced ability to communicate the 'soul' and 'passions'.

Ottenberg (1982) discusses this reduction in facial expressivity with respect to the work of Ekman and Friesen (1969). He argues that the mask serves to severely impede those forms of non-verbal communication that are primarily generated by the face, such as 'affect', 'regulators' of back-and-forward speech, and 'illustrators' of verbal speech. At the same time, the mask shifts the wearer's attempts at communication

towards more non-facially generated forms: 'emblems' (which roughly equate as gestures), and adaptive behaviours.

2.4.2 'Body-image' Stress

Turner (1981) argues that an increased body-awareness does not just arise when an individual is wearing a mask through having to express herself through different channels. He argues that it arises through an intersubjective process, by which the mask-wearer, sensing that she can not communicate facially, comes to believe that her observers will be more focused on her bodily movements. According to Turner, this leads her, too, to focus more extensively on her body. Turner labels this state of high body self-awareness 'body-image stress', and proposes that it can lead to a variety of symptoms: such as a displacement of body feelings, internal confusion about the body, and difficulties with breathing.

2.4.3 Miscellaneous Psycho-somatic Changes

Finally, a number of writers have suggested very particular physical consequences of wearing a mask. Eliade (1964), for instance, writes that the small eye-holes in the mask may aid the wearer's concentration because she has less visual distractions. Otteberg (1982), on the other hand, suggests that the small eye-holes may make the wearer less concerned about staring, because she feels that others can not see her eyes. Frost and Yarrow (1990) write that a mask-wearer may need to look down to see through a mask, a bowed posture which might then lead them to feel less self-worth. All these features, however, are only relevant to some or most masks, and can not be proposed as more generalised statements about the psychological effects of masks, *per se*.

2.5 SUMMARY

For the first time in the literature, this chapter has brought together and organised a wide body of hypotheses regarding the psychological effects of wearing a mask. A diagrammatic summary of these hypotheses --- in the form of a 'causal network' (Miles and Huberman, 1994) --- is presented in appendix 2a, which shows something of how these different hypotheses link together.

From this review, it seems evident that the question of the mask's psychological effect is an extremely complex

one, with many different inter-related hypotheses related to many different inter-related qualities of the mask. Clearly, then, for the purposes of this thesis, it would not be possible to explore every hypothesis regarding the mask's psychological effect at the necessary level of empirical and theoretical depth. However, the 'map' developed in this chapter provides an extremely useful starting point for this thesis, and will also be a useful starting point for furture researchers to explore the psychological effects of mask-wearing.

For the purposes of this thesis I have decided to focus on the two most frequently advocated hypotheses: that the mask disinhibits its wearer, and that the mask transforms its wearer. Along with this, for each of these hypotheses, I have decided to explore in detail the most frequently advocated reason for why this effect might come about. In the case of disinhibition, this is the anonymity hypothesis; and in the case of transformation, this is the hypothesis that the mask transforms its wearer through transforming her non-physiological 'facial' appearance. In focusing on these specific areas of the causal network, I am not ruling out the possibility that data relevant to other hypotheses will emerge. Indeed, because of the relatively open-ended methodology used in this study, this would seem almost inevitable. However, for the purposes of reviewing the relevant literature and designing the studies, I will be focusing specifically on these chosen areas of inquiry.

CHAPTER THREE. DISINHIBITION AND THE ANONYMITY-HYPOTHESIS: A LITERATURE REVIEW

From the previous review, it would seem that many authors believe that a mask will disinhibit its wearer. The aim of this chapter is to critically assess this hypothesis, with specific reference to the argument that the mask disinhibits its wearer by making her feel less identifiable. This chapter begins with a general review of empirical research regarding the hypothesis that the mask disinhibits its wearer. It then goes on to look more specifically at the relationship between mask-wearing, anonymity, and disinhibition, through a discussion of relevant psychological theory and empirical research. The chapter concludes by outlining a series of hypotheses that will be subjected to empirical testing.

3.1 THE DISINHIBITION HYPOTHESIS

In support of the disinhibition hypothesis, theorists have tended to point to two forms of evidence. The first of these is historical: that legislative officials in various cultures at various times have attempted to 're-inhibit' individuals by restricting the wearing of mask. MacGowan and Rosse (1924), for instance, note that Pope Innocent III, in attempting to control outlandish behaviour, forbade the clergy to wear masks. Similarly, Caillois (1962) writes that authorities in Rio de Janeiro were quite content merely to ban the masks, alone, when the general frenzy at the Carnival threatened to get out of hand.

Such 'evidence', however, is clearly limited by the fact that there may be a substantial difference between what legislative officials perceived as the psychological effects of wearing a mask, and what those effects actually were. Such perceptions may have arisen as a consequence of many different reasons --- for instance, historical, cultural, or political factors --- and may have very little to do with the actual lived-experience of wearing a mask. What this historical evidence tells us, then, is something of the 'social representations' (Moscovici, 1984) that existed regarding the mask's psychological effect, but it tells us very little beyond that.

As a second body of evidence in support of the disinhibition hypothesis, a number of authors have cited examples of mask-wearing individuals who behave in ways that appear socially transgressive. MacGowan and Rosse (1924), for example, point to such examples as the New Guinean Duk-Duk policeman/judge/executioner maskers, who burn or break the houses of those who do not comply to their 'justice'. Similarly, Honigman (1977) points to the intimidating, menacing and aggressive behaviour of men and boys masked as Krampus, a red-tongued, horned devil, who appears during the feast of St. Nicholas in Upper Austria. Honigman goes on to claim that this 'troublesome', 'uninhibited' and 'unconventional' behaviour --- in which the maskers often get 'carried away by their role' (p.268) --- is not unique to Krampus maskers, but has been reported in observations of other masked characters around the globe.

From a review of the ethnographic (and historical) literature, there would seem to be some truth to Honigman's (1977) claim. Throughout this body of research, one finds numerous examples of mask-wearing individuals who appear to behave in ways that are aggressive, sexual, or directly contrary to the established norms. Flickinger (1968) reports, for instance, that the masked Dionysian revellers of ancient Greece were notorious for behaving in boisterous, mischievous and lustful ways. Similarly, in Mexico today, Lutes (1983) describes how the masked Yaqui Paskola clowns act like crazed fools, engage in debauched sex, play among themselves and with the deer, symbolically play with and eat faeces, mock the divinities, do the sign of the cross backwards, and betray each other's confidence.

As with the historical evidence, however, there are substantial problems in attempting to infer psychological processes from these ethnographic observations.

First, any such attempts are based on universalist assumptions, which would be vulnerable to a charge of epistemological ethnocentrism. In the first place, there is the question of whether it is legitimate to understand non-western behaviours and experiences through contemporary western psychological constructs, such as 'disinhibition'. Furthermore, even if one concludes that it is legitimate, there is still the danger of assuming that what is transgressive within an contemporary western culture is also transgressive within a non-western culture. From a contemporary western perspective, for instance, eating excrement may be seen as a highly

disinhibited behaviour. But for those who are taking part in a non-western rite, in which, for instance, an individual wearing a particular mask was expected to eat excrement, then it might actually be more uninhibited not to eat excrement rather than to eat it. Hence, any attempt to label a behaviour as disinhibited would need to show very clearly what the inhibitions are within a particular cultural context at a particular point in time, and this is something which the ethnographic data generally fails to do.

Even if one could show, however, that within a particular cultural framework individuals do behave in a more disinhibited manner when they wear a mask, such evidence could not be taken to show that the wearing of a mask causes disinhibition. For a start, such an effect may only be limited to specific masks or types of masks, rather than masks in general. There is also the problem that correlation does not imply causation. It may be that there is a third factor --- such as a particular ritual context, or the act of performing or dancing --- which leads individuals to wear masks, and at the same time to behave in a disinhibited manner. It may also be the case, as suggested by Ottenberg (1975), that the direction of causation is not from the wearing of a mask to disinhibition, but from disinhibited behaviour to the decision to put on a mask.

Whilst the ethnographic data, therefore, shows that many masked individuals behave in ways which appear disinhibited to western eyes, it provides no firm support for the hypothesis that the wearing of a mask has a disinhibiting effect.

There is, however, a third body of data that has some relevance to the question of whether or not a mask disinhibits its wearer, and comes from a specifically contemporary western source. This is data from experimental investigations into 'deindividuation' and related areas (see section 3.2.1), which have used masks (e.g. Miller and Rowold, 1979), or mask-like hoods (e.g. Reicher, 1984), as part of the independent variable manipulation.

Perhaps the most relevant of these studies is a within-participants experiment conducted by Mathes and Guest (1976). They looked at how willing participants would be to engage in a 'disinhibited' behaviour --- carrying a sign around the campus cafeteria reading 'masturbation is fun' --- under conditions of identifiability and anonymity. This latter condition consisting of wearing

coveralls and a knitted ski mask that covered the whole head except for the eyes. Mathes and Guest (1976) found that participants were significantly more willing to carry the sign around campus in the anonymous condition, and also required less money to do so (M = $29.98 compared with M = $47.92).

What this study shows is that individuals may be more prepared to behave in a way that would normally invite embarrassment or ridicule if they believe that they will not be identified. However, there are a number of reasons why it can not be concluded from this study that individuals feel more disinhibited when they wear a mask. First, this study was looking at how individuals thought they would feel behind a mask, rather than the feelings themselves. Also, the effects of wearing a mask can not be distinguished from the effects of wearing coveralls. There is also the problem that the particular type of mask that the participants were asked to wear --- not unlike a 'bank-robber' mask --- may have been responsible for the greater willingness to behave in an 'anti-social' way.

The only other study that looked at the effects of wearing a mask, as opposed to a quasi-mask hood, is by Miller and Rowold (1979). Their field experiment compared the behaviour of masked and non-masked Halloween trick-or-treaters when greeted by a female experimenter who presented the children with a bowl of candies, told them that they were allowed to take two candies from the bowl, and then exited. Recordings from an unseen observer found that 62% of the masked children violated the 'only take two candies' rule, compared with 37% of the non-masked children. Using a significance level of 0.1, Miller and Rowold claim that this is a significant finding and conclude that 'costume masks...lead to lower restraints on behaviour in young children' (p.422).

Unfortunately, there are problems with this experimental design that make this conclusion highly premature. Aside from the question of whether it is valid to use a significance level of 0.1, there is also the problem that, is using a non-randomised sample, the finding from this study is essentially correlational. That is, it is not possible to say whether masks lead to lower restraints on behaviour, or whether those children who have lower restraints of behaviour choose to wear masks. It may also be that there is a third variable (such as intelligence or courageousness) which leads children to both wear Halloween masks and steal sweets. Furthermore, there is also the possibility, again, that it was the

type of mask, rather than wearing of a mask, per se, that led to the transgressive behaviour. This is likely to be an even more significant confounding variable than in the Mathes and Guest (1976) study, as the trick-or-treaters are likely to have been wearing masks of socially transgressive characters as such witches, ghouls and monsters.

There are other studies, such as Zimbardo (1969) and Rogers and Ketchen (1979), that have also used masks or mask-like hoods as part of the independent variable manipulation. However, in these studies, there are so many other aspects to the experimental manipulation (such as wearing large lab-coats, or being addressed by one's name) that it is really not possible to isolate the effect of wearing a mask, per se. Also, as with the Miller and Rowold (1979) and Mathes and Guest (1976) studies, the psychological effects of wearing a mask is confounded with the psychological effects of wearing a mask of a particular appearance.

It should also be noted that there are findings from these studies that fail to support the hypothesis that masked-anonymous individuals will behave in a less inhibited manner --- or, at least, suggest that this outcome is mediated by a number of other variables. For instance, Zimbardo (1969) found that hooded Belgian soldiers 'delivered shocks' for a shorter period of time than did non-hooded soldiers; as did female participants who 'administered shocks' alone rather than in groups. These findings will be explored in more detail in section 3.2.2.1.

Despite the numerous claims, therefore, that a mask disinhibits its wearer, it would seem that there is actually very little evidence on which to base this claim. At best, what can be said so far is that people seem to believe that they will feel less inhibited when they are wearing a mask, and that individuals who wear a mask do sometimes behave in a relatively uninhibited manner. Whether or not this is because the mask actually disinhibits them, however, is entirely unclear. Furthermore, the fact that there are some studies which show that some hooded individuals behave in a more inhibited manner would suggest that the relationship between mask-wearing and disinhibition is more complex than has been hypothesised in section 2.2.

3.2 THE ANONYMITY HYPOTHESIS

To examine the hypothesis that the mask disinhibits its wearer by making her less identifiable, it would seem useful to break this hypothesised process down into its two component parts. First, there is the hypothesis that a mask reduces its wearer's identifiability. Second, there is the hypothesis that a reduction in identifiability leads to a reduction in inhibitions.

3.2.1 Mask-wearing and Anonymity

It is often taken for granted in the literature that an individual is less identifiable when they wear a mask. However, as Gell (1975) and others have pointed out, this may not always be the case. If, for instance, a ritual performer can be easily identified by their clothes or gait, then putting a mask on is not likely to make them any less identifiable. Indeed, there are many other examples in which a mask would not make its wearer any less identifiable. An American Football player, for instance, may have his face 'masked', yet may be easily recognisable by the name and number on his back. Equally, if an individual talking on the telephone were to put on a mask, then she would become no less identifiable.

Hence, to assert that a mask always reduces its wearer's identifiability is not tenable. Rather, what it would be more accurate to state is that a mask covers up one particular channel through which an individual might be identified --- the face --- at one particular moment. In this respect, it can be predicted that a mask will reduce an individual's identifiability to the extent that that identifiability is dependent on facial recognition at that 'immediate' point in time.

Hence, in situations where an individual's identifiability is not based on their immediate facial recognition, it can be predicted that the mask will have little effect. This might be a situation in which the individual is easily identifiable through non-facial channels, as in the example of the American football player. Alternatively, it might be a situation in which there is no possibility of immediate facial recognition anyway, such as when someone is speaking on the telephone. It might also be a situation in which the mask-wearer has been recognised prior to putting on her mask, such that the observer is not dependent on seeing the mask-wearer's face at that particular point in time. However, in contexts in which an individual's

identifiability is based on being facially recognised at one particular point in time --- for instance, a bank-robber --- then it can be hypothesised that the mask will serve to reduce the mask-wearer's level of identifiability.

Furthermore, different types of masks are likely to reduce levels of identifiability by different amounts, depending on the parts of the face they cover, and how important those parts are for the purpose of identification. A mask which almost entirely covers its wearer's eyes, for instance, is more likely to reduce levels of identifiability than a mask which almost entirely covers its wearer's chin, on the grounds that the former is likely to be more important for the purposes of identification than the latter. This point may be a particularly important one when considering the different degrees to which full and half masks might reduce the levels of an individual's identifiability.

In exploring the relationship between mask-wearing and identifiability, it would also seem important to return to the distinction made in section 2.1.1 between 'actual' identifiability (i.e. how objectively identifiable one is to an observer) and 'felt' identifiability (i.e. how subjectively identifiable one feels at a phenomenological level). This distinction is not discussed in the psychological literature on anonymity, but it would seem an important one in understanding the possible psychological effects of wearing a mask. This is because, unless one takes a radically behaviourist perspective, the psychological effects of objective anonymity are likely to be entirely mediated by how anonymous an individual subjectively feels.

Most likely, 'actual' levels of anonymity will be an important input variable to the mask-wearer's felt-anonymity --- an individual will probably have some sense of how objectively identifiable they are. However, it seems extremely unlikely that there will be an exact correlation between these two variables: i.e. that no other input variables will affect the degree of experienced anonymity. A masked individual, for instance, may be entirely anonymous to those her around her, yet due to high levels of self-consciousness, experience herself as highly identifiable. Alternatively, as Saigre (1989) and Baptiste (1989) have suggested, an individual may be quite identifiable behind her mask; and yet, perhaps due to the protection afforded by the mask or because the mask limits her vision outwards, she may feel that she is less identifiable than she actually is.

Expectations of future identifiability may also be another factor in mediating between levels of actual-identifiability and felt-identifiability. If, for instance, a masked, anonymous individual feels that she will soon be identified, then her feelings of anonymity may be substantially attenuated.

Within the literature, there is no empirical evidence that individuals are actually less identifiable when wearing a mask or mask-like hood. However, there is some evidence to show that these facial coverings can reduce subjective feelings of identifiability. Solomon, Solomon and Maiorca (1982) found that 16 pre-test participants rated themselves as both significantly less identifiable and significantly more anonymous in a hooded condition as opposed to a non-hooded condition. Because participants in the hooded condition were also wearing sack-cloths and gloves, this reduction in identifiability can not be entirely attributed to the wearing of a hood. However, it seems extremely unlikely that the sack-cloths and gloves would have brought about a feeling of anonymity without the hood contributing to this feeling to some extent.

To summarise this section, then, what seems to emerge is that the mask does have the potential to reduce its wearer's feelings of identifiability. However, it would appear far too simplistic to suggest that there is a direct causal relationship from former to latter. Rather, what might be predicted is that the wearing of a mask --- under conditions in which an individual's identifiability is dependent on immediate facial recognition --- reduces an individual's actual identifiability. This is then one amongst a number of other unspecified factors that may lead an individual to feel less identifiable. However, what is really required at this point is some attempt to empirically verify this hypothesis.

3.2.2 Anonymity and Disinhibition

Assuming, then, that under certain conditions the wearing of a mask may contribute to a subjectively-felt experience of anonymity, To what extent might this lead to the kind of disinhibition that the mask has been hypothesised to bring about?

3.2.2.1 Deindividuation

In exploring this hypothesis, it would seem useful to turn to an area of social psychology in which this relationship between anonymity and disinhibition has been explored in substantial theoretical and empirical detail: that of 'deindividuation'. This term was first used by

Festinger, Pepitone and Newcomb (1952) to describe a state in which 'individuals are not seen or paid attention to as individuals' (p.382). Zimbardo (1969) developed this understanding further, and hypothesised that anonymity was one amongst a number of 'input variables' that could lead to a reduced concern with social evaluation, thus weakening the individual's 'controls based upon guilt, shame, fear and commitment' (p.253). The consequence of this, according to Zimbardo, was a lowering of the individual's 'threshold for expressing inhibited behaviours' (p.253), with the subsequent expression of 'output behaviours' that were, 'emotional, impulsive, irrational, regressive, with high intensity' along with, 'possible memory impairments, some amnesia for act' and perceptual distortions (p.253).

To test his theory of deindividuation, Zimbardo (1969) compared the behaviour of anonymous and identifiable female students in a Milgram-like learning experiment. In the first of his four studies, he found that anonymous women displayed greater levels of aggression and were less discriminating with respect to their victims (the latter he took as evidence that they were behaving in a less rational way). Several subsequent studies have confirmed Zimbardo's findings (e.g. Rogers and Ketchen, 1979). Naturalistic studies (e.g. Watson, 1973) and experiments using manipulations other than hoods or masks to invoke a state of anonymity (e.g. Mann, Newton and Innes, 1982) have also shown that decreases in identifiability increase the expression of emotional, impulsive or destructive behaviours.

However, whilst some studies have supported Zimbardo's (1969) finding, others have not (e.g. Beaman, Klentz, Diener and Svanum, 1979). As Diener (1980) summarises: 'Sometimes anonymity increases transgressions, sometimes it decreases them, and at other times anonymity interacts in relatively unpredictable ways with other variables' (p.221). Indeed, of Zimbardo's four studies on deindividuation only the initial one showed that anonymity increased aggression, whilst the other three suggested that aggression was decreased under conditions of hooded-anonymity. Similarly, Gergen, Gergen and Barton (1973) found that anonymity increased levels of prosocial activity rather than levels of antisocial activity.

How, then, can these anomalies in the deindividuation research be accounted for? First, Diener (1980) suggests that 'manipulations of anonymity may...heighten self awareness' (p.222). Diener gives the example of a bank robber in a ski mask who may be objectively anonymous

(and experience himself as anonymous), but concurrently feel highly individuated and self-conscious. That the mask may increase, rather than decrease, levels of self-awareness is the explanation used by Zimbardo (1969) in attempting to account for the reduction of levels of aggression in his supposedly 'deindividuated' Belgian soldiers. Zimbardo argued that uniformed army soldiers were already in a state of natural anonymity, and therefore the hoods and anonymity manipulation had actually served to increase a sense of isolation and uniqueness.

Also, Zimbardo (1969) has argued that anonymity-manipulations are more likely to increase levels of self-awareness, and hence decrease levels of deindividuation, when the individual is masked alone rather than in a group setting. This is because the masked-alone individual, 'has no group support and is made to feel self-conscious by obvious cues of difference from those observing him' (p.279). Findings from both Zimardo's third study and from Diener, Fraser, Beaman and Kelem, (1976) support this hypothesis.

A third explanation for the anomalies found in the deindividuation research is similar to a criticism made of the Mathes and Guest (1976) and Miller and Rowold (1979) studies. That is, it may be that the 'disinhibited' behaviour that emerges in some of the deindividuation research is more a consequence of the cues implicit in the types of hoods or uniforms used (for instance, Ku Klux Klan-like hoods) rather than the anonymity itself (Diener, 1980). Johnson and Downing (1979) tested this possibility by replicating Zimbardo's 'learning experiment', but this time adding a condition in which participants were asked to deliver shocks whilst wearing a nurses' uniform. As predicted, whilst anonymous participants in the Ku Klux Klan-like uniforms delivered more shocks, the reverse was true for participants wearing the nurse's uniform.

Johnson and Downing (1979) also explored the relationship between cue-manipulations and anonymity. They crossed the former independent variable (Ku Klux Klan outfit vs. nurses' uniform) with the latter (labelled consoles and name tags vs. no means of identification) to produce four separate conditions. The authors found no overall effect for the anonymity variable, but a highly significant cues × anonymity interaction, such that increased anonymity increased the effect of the cues on behaviour. That is, those dressed in nurses' uniforms became less aggressive

when they were anonymous and those dressed in Ku Klux Klan outfits more so.

3.2.2.2 Self-awareness as mediating variable

Johnson and Downing (1979) concluded from their findings, along with those of Gergen et al (1973), that anonymity did not lead to a decrease in inhibitions. Rather, they argued that it decreased the influence of internalised standards of behaviour, and concomitantly increased the influence of external cues. In this respect, they suggested that the effects of anonymity could be understood in terms of a reduction in objective self-awareness (Duval and Wicklund, 1972), and that it was self-awareness which mediated between the input variable of anonymity and the various output behaviours. The fact that anonymous-alone individuals seemed to become more inhibited as a consequence of heightened self-awareness pointed to a similar conclusion.

Wicklund (1975) defined the state of objective self-awareness as one in which the person 'takes' herself as an object. This is contrasted with the state of subjective self-awareness, in which the concept of self is background rather than figure in the individual's field of awareness. According to Duval and Wicklund (1972), the state of objective self-awareness is primarily an aversive affective state, as the individual recognises the discrepancies between their actual selves and ideal selves. According to Wicklund (1975), if the individual can not reduce this discomfort by avoiding the self-focusing stimuli, they will attempt to reduce the discomfort by trying to reduce the discrepancy: aligning their real self with their ideal self by acting more in accord with their cognitive, moral and ideological standards. In support of this hypothesis, numerous studies have shown that increased self-attention reduces behaviour which contravenes salient behavioural standards (e.g. Scheier, Fenigstein and Buss, 1974).

Methodologically, these studies have worked on the assumption that stimuli that remind the person of her self --- such as a mirror --- will increase her objective self-awareness. The other side of this assumption is that stimuli that draw the individual's attention away from her-self --- such as simple distractors --- will tend to reduce her objective self-awareness. Based on this thinking, Wicklund (1975) has argued that Zimbardo's (1969) deindividuating input variables --- including anonymity --- could also serve to draw the person's attention outwards, thus reducing levels of objective self-awareness.

Like Johnson and Downing (1979), therefore, Duval and Wicklund (1972), Wicklund (1975) and Diener (1980) have all re-interpreted deindividuation theory and research findings in terms of objective self-awareness theory. Each of them have argued that anonymity reduces objective self-awareness, thus leading to the reduction of an aversive affective state, and hence to a reduced concern for the discrepancy between behaviour and standards. The consequence of this is that the individual is therefore less likely to behave in accord with their own behavioural standard. However, as Johnson and Downing have shown, this does not mean that the output behaviour is no longer regulated. Rather, it means that the output behaviour will be regulated with respect to external cues as opposed to internal ones.

Such an understanding of the possible effects of masked-anonymity, however, has been further refined with the introduction of Carver and Scheier's (1981) hierarchical control-theory approach to self-regulation. Based on Powers' (1973) control-system model of behavioural organisation, Carver and Scheier hypothesise that increased self-attention increases the frequency of the testing phase -- between actual and ideal behaviour --- primarily at the 'Program' level of behavioural regulation. Hence, the individual is more likely to behave in accord with their moral and cognitive standards. Similarly, reduced self-attention --- for instance, through anonymity --- will reduce the frequency of the testing at this level. Hence, the individual will be less likely to regulate their behaviour in accord with moral or cognitive standards. However, this does not mean they will be regulation-less. Rather, according to the Carver and Scheier model, the 'temporary disconnection' of the higher levels of this system will mean that the lower, sensori-motor levels of control will be temporarily superordinate.

Carver and Scheier's (1981) model also distinguishes between public and private aspects of the self. This is a distinction that goes back to James (1890/1981), but has recently come to prominence through the work of Buss (1980). Buss defines private aspects of the self as those that, 'can be observed only by the experiencing person' (p.5): e.g. internal states, phenomenological experiences. Public aspects of the self, on the other hand, are defined as those elements that are entirely overt: e.g. physical appearance, behaviours.

Given this conceptual division of the self, it follows that self-awareness can be either directed to the private self or the public self. Hence, in contrast to earlier researchers, Carver and Scheier (1981) emphasise a distinction between 'private self-awareness' (attending to one's thoughts, ideals, emotions, etc.) (PRSA) and 'public self-awareness' (attending to one's immediate self-presentation, roles, etc.) (PBSA). Furthermore, as a corollary of this distinction, Carver and Scheier hypothesise that certain stimuli will increase private self-awareness (e.g. diary writing) and decrease private self-awareness (e.g. group cohesion), and others will increase public self-awareness (e.g. full length mirrors) or decrease public self-awareness (e.g. anonymity).

Buss (1980) identifies a number of studies that support this conceptual distinction. Prentice-Dunn and Rogers (1982), for instance, found that attentional cues (internal vs. external focus of attention) affected private self-awareness but not public self-awareness; whilst accountability cues (accountability to authority figures and victims) affected public self-awareness but not private self-awareness. Reviewing the empirical research in this field, Buss claims that public self-focusing stimuli have yet to be shown to induce effects associated with private self-awareness, and vice versa.

The implication here is that masked-anonymity will reduce the extent to which an individual behaves in accordance with their public self-standard, but it will not reduce the extent to which an individual behaves in accordance with their private self-standard. Hence, if an individual does not want to be seen by others as aggressive, then masked-anonymity may reduce the extent to which the individual inhibits this behaviour. However, if the desire to be non-aggressive is based on a personal, 'internal' standard, then masked-anonymity would be predicted to have little effect on this behaviour.

On the basis of this public/private distinction, Prentice-Dunn and Rogers (1982) and Diener (1976) have also challenged Zimbardo's (1969) hypothesis that the input variable of anonymity can lead to such subjectively experienced changes as amnesia and perceptual distortions. Rather, they argue that these changes at the level of the private self can only come about through reduced private self-awareness, not reduced public self-awareness. In support of this hypothesis, Diener found that anonymous conditions had no significant effect on participants' self-ratings of 'internal', subjective experiences: for instance, distorted time perceptions.

The only effect that anonymity had was to reduce participants' concerns over what other group members thought about them. Furthermore, factor analyses of 'internal states' by both Prentice-Dunn and Rogers and Diener found that feelings of anonymity did not load significantly on either of the main factors.

Based on these findings, Prentice-Dunn and Rogers (1989) have proposed a theory of 'differential self-awareness'. The basis of this theory is a distinction between disinhibition as a consequence of reduced private self-awareness (for which they retain the term 'deindividuation'), and disinhibition as a consequence of reduced public self-awareness, which they exclude from a definition of deindividuation. With respect to this latter process, they state

> anonymity and diffused responsibility reduce individual accountability for acts by making individuals less aware of the public aspects of himself. That is, he is less concerned with others' evaluation of him and has decreased expectations of reprisals, censure, or embarrassment for any actions. The resultant behaviour may be explained in terms of expectancy-value theory: The individual is quite aware of what he is doing, he simply does not expect to suffer negative consequences for his conduct. (Prentice-Dunn and Rogers, 1989, p.94)

The implication of differential self-awareness theory is that the wearing of a mask --- under conditions in which the wearer feels less identifiable --- will not lead to any substantial changes in the wearer's subjective experiencing. It will not, as Saigre (1989) suggests, help her feel more in touch with her 'psychotic part'; nor will it, as Zimbardo (1969) outlines, lead to perceptual distortions or emotional impulsivity. What masked-anonymity will do, according to differential self-awareness theory, is simply reduce the extent to which the wearer is concerned with what others think of her. The result is that she may then behave in ways that she would normally inhibit for fear of public censure.

3.2.2.3 Criticisms of differential self-awareness theory

Differential self-awareness theory seems to be the last statement within the social psychological literature on the psychological effects of anonymity. However, because the theory is primarily concerned with the effects of reduced private self-awareness, Prentice-Dunn and Rogers' (1989) analysis of the effects of reduced public self-

awareness is not so carefully constructed. Hence, there are four areas of particular weakness in their theory.

3.2.2.3.1 Public self-awareness as focus of attention
In superimposing an expectancy-based theory on to a theory of self-awareness, Prentice-Dunn and Rogers (1989) are in danger of reducing a theory of attentional focus down to a more specific theory of motivation. Certainly, as Prentice-Dunn and Rogers contend, there is the possibility that an individual will feel less concerned with how she presents herself because she is less concerned about being punished. However, for both Carver and Scheier (1981) and Buss (1980) --- on whose work Prentice-Dunn and Rogers base their theory --- this is not the only means by which a reduction in public self-awareness is hypothesised to come about. Indeed, both Carver and Scheier and Buss as well as Duval (1975) are primarily concerned with the way in which public self-awareness can be increased or reduced as a consequence of attentional cues: such as the presence or absence of a full length mirror. Furthermore, if a reduced concern with meeting one's public self ideal came about simply because one was less concerned with being punished, then the findings of such studies as Johnson and Downing (1979) and Zimbardo (1969) --- that manipulations of anonymity can sometimes heighten levels of inhibition --- would once more become inexplicable.

Whilst masked-anonymity, therefore, may reduce an individual's public self-awareness because she feels less open to reprisals, it may also reduce an individual's public self-awareness for less motivational --- and more attentional --- reasons. As Duval and Wicklund (1972), for instance, suggest, it may be that if an anonymous individual feels that others are less focused on her appearance, she, too, may become less focused on how she looks. But this is not due to a reduced concern with being identified. Rather, it may be that the diverted gaze of others also leads her focus of attention away from her public self.

Also, the mask may bring about increases or decreases in public self-awareness that are not specifically related to levels of identifiability. For instance, a highly conspicuous or ostentatious mask may increase the mask-wearer's attention on how she look, whilst a mask that is very similar to the masks that other individuals are wearing may further reduce the individual's public self-awareness.

3.2.2.3.2 Is the public self ideal and identifiability always inhibiting?

Differential self-awareness theory is based on the implicit --- and, to a great extent, unquestioned --- assumption, that an individual's 'instinct' is to behave in a way that is contrary to their public self ideal. Hence, the disconnection of the public self ideal will lead to an expression of previously inhibited instincts. This assumption can be traced back to the work of Zimbardo (1969) --- who entitled his seminal paper 'The human choice: individuation, reason and order versus deindividuation, impulse and chaos' (p.237) --- and beyond that to Freud's (1923) theory of the conflict between superego and id.

What such a set of assumptions does not allow for, however, is the possibility that the individual's 'instincts' may be to behave in ways that are compatible with the public self ideal; or, indeed, that the creation and maintenance of the public self is part of the individual's 'instinctual' behaviour. For instance, along the lines of Bowlby (1953), an individual may have an 'instinct' to form close attachment with people, and she may also be concerned that others see her as wanting to form close relationships. If this is the case, then a reduced concern with how she presents herself will not serve to disinhibit this instinct. Indeed, to some extent, a temporary disengagement of the public self may actually reduce the extent to which the individual attempts to meet this ideal. In this respect, then, one can not conclude, as Prentice-Dunn and Rogers (1989) and Zimbardo (1969) do, that a reduction in public self-awareness will lead to a disinhibition of behaviour. Rather, what would be more veridical to conclude is that a reduction in public self awareness will be disinhibiting to the extent that an individual's 'instinct' is to behave in ways that are contrary to the public self ideal.

This line of reasoning can be taken one step back, to the question of how an individual will respond if she feels that others can not identify her. Based on the assumption that an individual's instinct is to behave in ways that others would normally censure or castigate, Prentice-Dunn and Rogers (1989) simply assume that an anonymous individual will take advantage of this situation to behave in less inhibited ways. But what if the individual's 'instinct' is to be identified by others, or to be seen for who she is? An example of this might be a street performer who is very proud of her work, and therefore wants others to know that it is she who is

performing in this way. Under these conditions, masked-anonymity may be experienced as a condition which inhibits her desire to be identified.

This is similar to the critique of deindividuation theory put forward by Maslach (1974), Dipboye (1977) and others: that an individual may have a desire to 'individuate' herself --- i.e. establish herself as a differentiated and unique being --- as well as a desire to fall in to a state of de-individuation. On the basis of this theory, Dipboye re-interprets the findings of the classic deindividuation studies, arguing that the counter-normative behaviour evoked by conditions of anonymity did not arise because the participants felt deindividuated, but because they wanted to re-establish their own individuality and uniqueness. Such an explanation could also be used to account for the boisterous and anarchic behaviour that mask-wearers around the globe have also been observed to display. More direct empirical support for the individuation hypothesis comes from studies which show that participants who were made to feel similar to others subsequently made greater attempts to re-individuate themselves: for instance, by conforming less to peer judgements (Duval, 1976).

Maslach (1974) argues that whether individuals try to individuate or deindividuate themselves depends on whether positive or negative external events are forthcoming, respectively. In support of this hypothesis, Maslach found that participants who were told that they would win extra money for 'designing' a city well were keener to individuate themselves than participants who were told that they would receive electric shocks if they 'designed' the city badly.

This issue of individuation, then, suggests two things. First, that the state of anonymity, in itself, may be experienced as inhibiting rather than leading to a state of disinhibition. Second, under conditions where positive external events are forthcoming, an anonymous individual may attempt to re-individuate themselves. If this occurs, then an anonymous individual may actually become more concerned with how they present themselves rather than less.

3.2.2.3.3 Social identity theory

A third criticism of differential self-awareness theory is that the disinhibited behaviour which conditions of anonymity sometimes evoke may be more to do with an increased salience of social identity as opposed to a decreased awareness of the public self. Based on Turner's

(1982) 'social identity theory', Reicher (1984, 1987) proposes that visual anonymity may be one of several conditions that removes the individual's attention from personal aspects of the self and re-focuses it on social aspects of the self. The consequence of this is that the individual may then attempt to match her behaviour to the perceived in-group standard.

However, Reicher (1987) goes on to suggest that the effects of anonymity will be dependent on the context in which it occurs. Anonymity in a situation where one group is spatially separated from another will decrease the visual differences between members of the in-group and heighten their differences from an out-group. 'The consequence is an accentuation of group boundary and therefore increased salience of group identity and identity-based behaviour' (p.186). An example of this might be a procession of masked revellers who are being observed by a group of authority figures, such as the police. Knowing that they are all anonymous together, and that this anonymity distinguishes them from the identifiable police, the mask-wearers may experience a heightened sense of being part of the revelrous group, and hence behave more in accordance with the group norms: e.g. extroverted, ostentatious, 'uninhibited' behaviour. On the other hand, Reicher (1984, 1987) suggests that if two groups are split and intermingled, then anonymity would further destroy the group boundaries --- hence decreasing social identity and the referent informational influence.

Reicher's (1984) account of the relationship between anonymity and behaviour goes some way to explaining why hooded-anonymity may increase disinhibited behaviour when the individual is part of a distinctively masked or hooded group, but not when she is masked or hooded alone. In support of this account, Reicher found that masked and baggy-clothed science students, who were told that science students were normally pro-vivisection, moved closer to this group norm when they were in a group, and further away from it when they were spatially integrated with a group of social science students.

Along similar lines, there may also be other intervening variables that will affect the relationship between the wearing of a mask and the relative salience of social or personal identity. If all individuals in a group, for instance, are wearing a similar mask, then the individuals' sense of group membership and social identity may be substantially augmented. If, on the other hand, an individual is wearing a mask that stands out

from the rest of the group, then the mask may serve to heighten the individual's sense of isolation and personal identity rather than social identity. As with Reicher and Levine's (1994) study, too, the masked or non-masked nature of the out-group is likely to influence the effect of the in-group's mask. If, for instance, the out-group are not masked, or if they are wearing masks that are different to the in-group's masks, then one can predict that the salience of the in-group members' social identity may be heightened. An out-group that is masked in a similar way to the in-group, however, may reduce the in-group members' sense of distinctiveness and hence the relative salience of their social identity.

Reicher (1984, 1987), then, highlights the possibility that the wearing of a mask may actually heighten adherence to group norms, rather than taking the mask-wearer's attention away from her public self. As Abrams (1990) argues, however, these two approaches are not necessarily contradictory, as the personal/social identity dimension is by no means veridical to the private/public self dimension. An individual's public self-standard, for instance, may contain elements that are related to both personal and social norms; just as an individual's private self-standard may include both individual definitions of who she should be, and definitions that are related to particular social groups. Hence, Reicher's analysis does not dismiss the claims made by Prentice-Dunn and Rogers (1989). Rather, it suggests that the wearing of a mask may bring about a highly complex interaction between an individual's awareness of their public and private self, and the relative salience of the social and personal facets of these selves.

3.2.2.3.4 Individual differences

A final limitation of differential self-awareness theory is that it does not discuss the possibility that different individuals will respond to conditions of anonymity in different ways.

One individual difference of particular significance may be that of 'public self-consciousness'. In contrast to the transient state of public self-awareness, 'public self-consciousness' refers to a consistent tendency of persons to direct their attention to their public self (Fenigstein, Scheier and Buss, 1975). The individual high in public self-conscious is characterised as being, 'concerned about their appearance, style of behaviour, and in general about the impression they make on others' (Buss, 1980, p.44). This is not to suggest, however, that

an individual high in public self-consciousness is consistently more focused on her public self. Rather, Buss writes that an individual who is high in public self-consciousness is someone who is more susceptible to public self-awareness manipulators.

The significance of this individual difference variable lies in the fact that anonymity --- masked or otherwise --- can not 'make' an individual less aware of their public self. This is because, if an individual is not aware of their public self in the first place, then the wearing of a mask will have no effect. Rather, the prediction is that mask-anonymity may be able to reduce levels of public self-awareness that are already present. This means that the wearing of a mask is likely to bring about a greater reduction in public self-awareness for those individuals high in public self-consciousness as opposed to those individuals who are low in public self-consciousness. This is because the former group are likely to experience much greater rises of public self-awareness that the mask can then lessen, as compared with those in the latter group, who may experience something of a 'floor effect'.

There is the possibility, however, that this effect may be counterbalanced by an effect discussed earlier in the chapter: that individuals are likely to differ in the extent to which they feel self-conscious about wearing a mask. Hence, an individual high in public self-consciousness, compared with someone low in public self-consciousness, may experience more self-consciousness to be attenuated by masked-anonymity, but she may also experience a greater increase in self-consciousness as a result of wearing the mask itself. Thus, it is uncertain exactly how masking and self-consciousness are likely to interact --- but it is a question that would seem of considerable significance in understanding the psychological effects of wearing a mask.

Another significant individual difference variable may be the extent to which individuals wish to individuate themselves. According to Maslach et al (1985), some people may be more willing to engage in behaviours that publicly differentiate themselves from those around them than others. If this is the case, then individuals with a greater desire for individuation may experience the wearing of a mask as more inhibiting, because they have a greater need to be seen for who they are.

Finally, another individual difference that may affect how individuals respond to masked-anonymity is that of

self-esteem. As Gibbons (1990) states, 'persons who are low in self-esteem find self-focus to be more aversive' (p.275). Hence, it may be that individuals with low self-esteem may find masked-anonymity more comfortable than those high in self-esteem, because the former group may experience more 'relief' in not being focused on themselves. Individuals with high self-esteem, on the other hand, who have little real-ideal self-discrepancy, may not be particularly bothered by being aware of themselves. Indeed, if individuals high in self-esteem actually take pleasure in self-focused attention, then they may experience masked-anonymity as somewhat inhibiting.

3.3 SUMMARY

On the basis of this review, three main hypotheses can be established regarding the relationship between mask-wearing, anonymity, public self-awareness and disinhibition.

1. The wearing of a mask, under conditions in which an individual's identifiability is dependent on 'immediate' facial recognition, will lead to a reduction in feelings of identifiability.

2. The wearing of a mask, under conditions in which it reduces an individual's identifiability, and under conditions in which positive external events are not forthcoming, will contribute to a reduction in feelings of public self-awareness.

3. The wearing of a mask, under conditions in which it reduces an individual's public self-awareness, and under conditions in which an individual wishes to behave in a way that is contrary to their public self-standard, will have a disinhibiting effect.

Alongside these three main hypotheses, there are also a number of other tentative hypotheses that emerge from this review.

First, the wearing of a mask, under conditions in which an individual is alone or highly conspicuous, will contribute to an increased feeling of public self-awareness.

Second, masked-anonymity will not reduce an individual's awareness of their private selves, nor will it affect an individual's other 'internal' experiences.

Third, masked-anonymous individuals, under conditions in which positive external events are forthcoming, will experience a greater desire to re-individuate themselves.

Fourth, masked-anonymous individuals, under conditions in which they are within an in-group and spatially distinguished from an out-group, will become less aware of their personal identity and more aware of their social identity.

Fifth, individuals high in public self-awareness will experience a greater reduction in public self-awareness than individuals low in public self-awareness as a consequence of masked-anonymity.

Sixth, individuals with a high desire to individuate themselves will experience masked-anonymity as more inhibiting than individuals with a low desire to individuate themselves.

Seventh, individuals high in self-esteem will experience masked-anonymity as less pleasurable and more inhibiting than individuals low in self-esteem.

CHAPTER FOUR: AN EMPIRICAL INVESTIGATION INTO THE EFFECT OF WEARING A MASK ON FEELINGS OF IDENTIFIABILITY, PUBLIC SELF-AWARENESS AND INHIBITION

4.1 INTRODUCTION

4.1.1 Aims

The aim of this chapter is to empirically investigate the three main hypotheses that were established at the end of chapter three. Along with this, this study aims to initiate an exploration of the more tentative hypotheses that emerged from that chapter.

4.1.2 Methodological Issues

4.1.2.1 Experimental or non-experimental design?

One of the first questions that arises in attempting to test these hypotheses is whether it would be more appropriate to use an experimental or non-experimental design. The latter, for instance, could include semi-structured interviews with individuals who have worn masks at masquerade parties, or a questionnaire study with drama students who have worked with masks.

Adopting a non-experimental design would have a number of advantages. First, and most significantly, such a study would be likely to have a high ecological validity, as it would be looking at the effects of wearing a mask in the actual contexts in which this wearing occurs. Second, a non-experimental design would be able to draw data from the whole spectrum of environments in which masks are worn --- for instance, in professions like welding --- many of which would not be amenable to experimental manipulation.

However, the main disadvantage of most non-experimental designs is that the data which they produce is essentially correlational. Even if it were found, therefore, that individuals felt less inhibited when they were wearing a mask, there would be no way of establishing that the wearing of a mask had led to this disinhibition. First, there is the 'third variable problem'. When drama school students wear masks, for instance, they also tend to engage in a series of other

activities which are considered part of 'mask-work', such as making their faces and bodies into the 'shape' of the mask-character. Hence, if drama school students said that they felt less inhibited when wearing a mask, there is no way of showing that this is due to the actual wearing of the mask and not to the re-shaping of their bodies. There is also the problem of 'direction of causation'. That is, drama students may feel less inhibited when they wear a mask because the teacher asks them to wear masks when they are about to perform a 'disinhibited' activity, rather than because the mask disinhibits them.

One way around this problem might be to avoid a more descriptive line of questioning, and instead to ask informants to comment on the particular hypothesis under inquiry. For instance, one might directly ask, 'What did you experience as the psychological effects of wearing a mask?' There is a real advantage in this line of questioning, as it both invites the respondent to comment only on the hypotheses under question, and it also involves the informant as an active co-researcher (Rowan and Reason, 1981) rather than as a passive respondent. The disadvantage, however, is that the informant may still find it difficult to disentangle the relationship in question from other co-variables.

In the context of a non-experimental study, such a line of questioning would also encounter the problem that the hypotheses being proposed are actually fairly complex. What is not being hypothesised, for instance, is simply that the mask disinhibits its wearer. What is being proposed is that the wearing of a mask, within a particular context, and when its wearer has particular motivations (and possibly also a particular disposition), has a disinhibiting effect. Hence, if one were to directly test the present hypotheses, one would really need to ask: 'Do you think that the wearing of a mask, under conditions in which it has reduced your levels of identifiability and your awareness of how you present yourself, reduces your level of inhibitedness?' Clearly, such questions would be far too unwieldy and complicated, particularly for a questionnaire study. Furthermore, there would be no guarantee that informants had worn masks in the specified contexts, and one might therefore end up asking a lot of questions which participants simply couldn't answer. Whilst one could attempt to get around this problem of contextualisation by asking, 'Did you feel more identifiable when wearing the mask?' 'Did you feel more aware of your public self?' etc. and then looking for correlations, one would then be faced with

all the limitations that are inherent to correlational data (see section 3.1).

Given these difficulties, the most appropriate non-experimental method for exploring these hypotheses would probably be one of in depth, intensive, qualitative interviews (e.g. Kvale, 1994). This is because a qualitative interview would give the interviewer an, 'opportunity to cast questions in terms that are clear to a specific respondent and to ask the same question in a variety of different ways if there is any doubt as to the respondent's comprehension' (Williamson, Karp, Dalphin and Gray, 1982, p.183). The dialogical nature of a qualitative interview would also allow the interviewee to say when she did not understand a question, and ask for clarification --- something that would not be possible in a questionnaire study. Questions within a qualitative interview can also be tailored to fit the respondent's particular experiences. Hence, there would be less chance of asking informants questions that were irrelevant to their actual experiences of wearing a mask, and more of an opportunity to explore in detail those experiences that the informant had actually had of mask-wearing.

Even with such a non-experimental approach, however, it is uncertain how easy informants would find it to respond to the specific hypotheses under question. There is also the problem that, because qualitative interviews are intensely time-consuming --- not only in terms of interviewing, but also in terms of transcription and analysis --- it would be difficult to work with more than a relatively small sample size. This, then, substantially limits the population validity of the findings. This population validity is further limited by the fact that, with non-experimental qualitative interview studies, one tends to sample on the basis of such criteria as 'experience with the investigated topic' and 'articulateness' (e.g. Colaizzi, 1978) rather than on a random basis. A non-experimental, qualitative interview study, therefore, would not seem quite the right tool to build up an understanding of the mask's psychological effects that had some degree of generalisability. This does not preclude the possibility, however, that there would be a value in using a qualitative interviewing methodology in a more experimental context (see section 4.1.2.3).

In turning towards more experimental methodologies, there are clearly substantial limitations here too. The most significant of these is the low ecological validity that the findings from such a study are likely to have.

Individuals do not tend to wear masks in strictly controlled situations where one or more factors are varied and the others are kept constant. Hence, it could be argued that 'the results obtained therein may hardly be expected to generalise to "real-life" settings' (Kruglanski, 1975, p.104). Furthermore, an experimental design inevitably introduces a whole series of artefacts --- demand characteristics, evaluation apprehension, experimenter effects, etc. (see sections 4.1.2.6 and 4.1.2.7) --- which are less present in 'real life' contexts.

Because of its inherently manipulative nature, there is also the possibility that participants in an experimental study may find the experience demeaning and infantalising. Not only would this then throw up ethical questions and the issue of catalytic validity[4], but it might also mean that participants would 'react' (Kruglanski, 1975) against the experimental design. For instance, they might deliberately give false answers or refuse to take the experiment seriously.

Nevertheless, in attempting to empirically examine the hypotheses developed in chapter three, there are some clear advantages of using an experimental design. Because it is possible to manipulate just the variable of mask-wearing whilst holding all other variables constant, an experimental design should make it possible to identify the specific effects of wearing a mask. The constructed nature of an experimental design should also make it possible to create a situation in which the very specific hypotheses under inquiry can be tested. With an experimental design, there is also the advantage that more participants can be 'run', and therefore the study has greater population validity. These advantages do not take away from the fact that any experimental findings are likely to lack ecological validity. However, if it can be shown that the wearing of a mask has particular effects within an experimental context, then this would serve as a very useful basis from which to explore its effect in a more ecologically valid setting. For these reasons, then, it would seem appropriate to adopt an experimental means of investigation.

4.1.2.2 Laboratory- or Field-experiment?

Having decided to pursue an experimental line of research, the next question is whether such an experiment

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[4] 'The degree to which the research process reorients, focuses, and energises the participants' (McLeod, 1994, p.100).

should be carried out in a laboratory or field setting. A field experiment, for instance, might involve asking drama students to try out an identical exercise, sometimes masked and sometimes non-masked; or it could involve asking one group of individuals to go to a party masked, and a control group non-masked.

Given that an experimental design already involves a substantial loss of ecological validity it would seem ideal to try and make an experiment as naturalistic as possible. A naturalistic design might also help to get around the problem of 'volunteer bias' that would be inevitable in a laboratory-based study.

However, there are two main problems with a naturalistic study. First, it becomes increasingly difficult to ensure that it is only the independent variable(s) that are varied from condition to condition. Guests at a party, for instance, might respond to masked participants in a very different way to unmasked participants. Hence, if it were found that masked participants behaved in a less inhibited way than unmasked participants, this may be more to do with the guests' responses that the fact that the participants felt anonymous behind the masks.

A second problem with a more naturalistic experimental design is a much more practical one: that of actually trying to set up such a study. There are unlikely to be many drama teachers, for instance, who would be willing to alter their teaching curriculum to accommodate a psychological experiment; just as it might prove difficult to assemble a group of individuals who would be willing to attend masked parties.

For these two reasons, it was decided to develop an experiment that would be laboratory-based. Such an experiment is undoubtedly limited in its ecological validity, but it does provide the greatest opportunity to specifically isolate the variable of mask-wearing, and to ensure that the study actually tests the hypotheses that are being proposed.

To test the first hypothesis, that the wearing of a mask would reduce feelings of identifiability under conditions in which identifiability was based on 'immediate' facial recognition, the present study was based around the following task. Open University undergraduate students were asked to talk to Sussex University students 'via' a video camera. That is, they were asked to talk to a video camera and told that the video footage that these cameras

recorded would be watched (at an unspecified time later) by groups of Sussex undergraduate students.

With respect to generating in participants a belief that they could be identified by their faces, such a design was not ideal. The Open University students, sitting in a room on their own, may have found it difficult to retain the idea that they were actually talking to --- and hence identifiable by --- someone. However, gathering together actual students to whom the participants could have talked would not have been economically or practically feasible. Hence, talking to a video camera was considered the most effective means of invoking a sense of immediate identifiability within practical limitations.

In terms of invoking a sense of felt-identifiability, it was also uncertain as to the effectiveness of having Open University students talk to Sussex University students. The concern here was that the Open University undergraduates --- not knowing, and being unlikely to ever know, the Sussex undergraduate students --- may have felt entirely unidentifiable in the first place. Hence, they might not feel any less identifiable wearing a mask. However, the alternative, to have Open University undergraduates 'talk' to Open University undergraduates or Sussex University undergraduates 'talk' to Sussex University undergraduates, may have been no less problematic --- though in the opposite direction. Here, students may have felt so identifiable by those watching them that they might have become much more concerned with being identified by other cues --- for instance, voice, clothes, or physical characteristics --- such that immediate facial recognition would be seen as adding little to one's already high identifiability.

As well as being very practical, a second advantage of using a video camera as part of the experimental design is that it has been shown to increase levels of public self-awareness (Buss, 1980). This is essential to test the second main hypothesis, that the mask will reduce feelings of public self-awareness, under conditions in which some degree of public self-awareness is already present. Also, because the participants were talking to a video camera rather than actual people, it seems less likely that they would be expecting positive external events to be forthcoming. Hence, participants were not expected to experience a strong desire to enhance their public self-awareness.

Designing the study such that it could test the third main, disinhibition hypothesis proved the most difficult

to achieve. This was primarily due to ethical reasons: by definition, what one has to try and do here is to create a situation in which participants would want to behave in ways that contravene their own public self ideals. Previous 'deindividuation' studies have achieved this through a variety of manipulations: for instance, 'informing' participants that 87% of students possessed, 'a strong, deep-seated hatred of one or both parents, ranging from generalised feelings of hostility to consistent fantasies of violence and murder' (Festinger et al, 1952, p.384). Such approaches, however, raise some serious ethical concerns, because they specifically encourage participants to behave in ways that those participants would normally inhibit.

Hence, in the present study, no attempt was made to actively encourage participants to behave in ways that contravened their public self ideals. Rather, the aim was to create a situation in which, if participants did have feelings that contravened their public self ideals, they might take the opportunity to express them. Thus, the Open University students were asked to talk directly to the Sussex University students about aspects of the Sussex University students' lives. It was predicted that, amongst other feelings, the Open University students might have some feelings of resentment or antipathy towards the full-time Sussex undergraduates, the expression of which would be inhibited under conditions of high public self-awareness, because of a discrepancy with the ideal public self. However, under conditions of reduced public self-awareness, it was predicted that the Open University students might feel less inhibited about expressing some of these feelings of hostility and resentment.

As a second means of assessing levels of behavioural disinhibition, participants were asked to talk about themselves. Here, the assumption was that participants may have some desire to disclose personal information about themselves to others --- satisfying the individual's expressive needs (Derlega and Grzelak, 1979) --- but that these disclosures would be inhibited for fear of judgment or ridicule. Hence, it was predicted that if participants were less concerned with how they presented themselves behind a mask, they might be more likely to disclose intimate information about themselves.

4.1.2.3 Qualitative or quantitative measures?

Having developed the basic experimental design, the next question was whether to take qualitative or quantitative measures. Whilst it is often assumed that an experimental

design necessitates the taking of quantitative measures, there is no reason why this need be the case. Indeed, in recent years, an increasing number of researchers have designed experimental studies in which the dependent measures are primarily qualitative, such as verbal protocol analysis (e.g. Barber and Roehling, 1993) or the phenomenological instructional intervention method (Hedegaard and Hakkarainen, 1986). Furthermore, in using qualitative measures as part of an experimental design, many of the problem endemic to non-experimental qualitative studies --- for instance, the correlational nature of the data (see section 4.1.2.1) --- are effectively overcome.

Quantitative and qualitative measures both have their strengths. The great strength of quantitative measures is that a large body of data --- by virtue of its unidimensionality --- can be readily amalgamated, such that it can be subjected to a wide variety of statistical operations.

Qualitative data, on the other hand, has a richness, 'thickness' (Geertz, 1973) and multidimensionality that allows it to capture something of the texture, complexity, holism and uniqueness of human lived-experiences. This is of particular importance if one moves beyond a positivistic world-view. 'Philosophers of existence' such as Heidegger (1926/1962) and Merleau-Ponty (1962), for instance, have argued that human Being-in-the-world can not be reduced down to a mathematically-ordered, quantifiable form, for to do so would be to lose the interpenetrative, intersubjective, multidimensional complexity of human Da-sein. Qualitative data is also seen as having the capacity to express meanings, which, from an existential point of view, is the essence of human lived-experience (e.g. Merleau-Ponty). With the emergence of postmodern sensibilities (e.g. Lyotard, 1984) --- in which text, narrative and discourses take precedence over individual human experiences --- the importance of using language to describe and analyse psychological phenomenon becomes even more marked.

The value of qualitative data, however, is not only that it complements a contemporary, post-positivistic world-view. For Miles and Huberman (1994), who continue to locate themselves within a modernist, deterministic framework, one of the main strengths of qualitative data is that it is a very powerful method for assessing causality. They write:

> Qualitative analysis, with its closeup look, can identify mechanisms, going beyond sheer association.... It is well-equipped to cycle back and forth between variables and processes --- showing that stories are not capricious, but include underlying variables, and that variables are not disembodied, but have connections over time. (p.147)

Putting the wider question of 'causality' to one side, Miles and Huberman's (1994) point that qualitative data is effective in 'making links' between variables is of particular importance to the present hypotheses, where there is a desire to closely examine the link between a number of different experiences. Quantitative data, for instance, might be able show that the wearing of a mask reduced feelings of identifiability, but it would not be able to show the process through which that reduction comes about. By contrast, with qualitative data, one has the opportunity to actually ask a participant: 'What was it about the wearing of a mask that reduced your feelings of identifiability?'

Another strength of qualitative measures is that they are more open to serendipity, and hence the development of new hypotheses and new lines of inquiry. With quantitative measures, the dimension along which responses will be given are pre-defined; hence, there is little chance of something new emerging. By contrast, qualitative measures --- particularly unstructured ones --- can be responded to along a variety of dimensions. Hence, there is more chance that participants will respond in a way that had not been predicted.

A final strength of qualitative measures is in terms of their catalytic validity. In relating to participants in 'their own language', qualitative measures may be more likely to communicate to participants a sense that their own experiences, understanding, and beliefs are of value and significance. This may then energise participants to think about the kinds of research questions being asked, and to take some learning away from the experiment themselves.

In contrast to the choice between using an experimental or non-experimental design, however, there is no need to choose between using quantitative or qualitative measures, as they are by no means mutually exclusive. Indeed, whilst they tend to be rooted in somewhat contradictory philosophical positions, there is no 'one-to-one relationship between the quantity-quality

distinction and the empiricism/constructivism epistemological divide' (Henwood and Nicolson, 1995, p.109). Just as qualitative data can be used within a primarily positivistic framework: for instance, Boyatzis's (1998) 'thematic analysis'; so quantitative data can be used within a primarily post-positivistic framework: for instance, Kuiken, Schopflocher and Wild's (1989) 'numerically-aided phenomenological method'.

In recent years therefore, writers like Henwood and Nicolson (1995), McLeod (1994) and Miles and Huberman (1994) have highlighted the possibility of a pluralistic methodology, in which the 'essentially unproductive' (Miles and Huberman) argument between qualitative and quantitative measures is abandoned. Instead, a more pragmatic approach --- in which the strengths of both types of data can be combined --- is turned to. Miles and Huberman argue that one of the main strengths of such a mixed-method is that it enables the confirmation or corroboration of both sets of data via triangulation[5]. Furthermore, because each of the sources of data may be able to compensate for the limitations of the other --- for instance, quantitative data should be able to show the generalisability of specific findings, and therefore correct for the possibility that 'monolithic judgements' have been made on the basis of the qualitative data --- then this may be a particularly effective means of triangulation.

Like Dey (1993) and Kvale (1994), however, Miles and Huberman (1994) take this argument one step forward by arguing that it is not only desirable to combine qualitative and quantitative measures, but that these measures will always be inextricably intertwined. Just as qualitative measures would be meaningless, therefore, if there was no sense of 'how many' or 'how frequently', so quantitative measures would be meaningless if they were not attached to some kind of qualitative data: such as the wording of an item in a scale.

For the present study, therefore, there was an attempt to combine the strengths of both qualitative and quantitative data in the most constructive way. To identify the general extent to which the wearing of a mask might reduce levels of identifiability, public self-awareness, and the other variables of interest within a population, quantitative measures were used. However, to

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[5] Validating a finding by subjecting it to 'the onslaught of a series of imperfect measures' (Miles and Huberman, 1994, p.267).

get some sense of how people actually experienced the wearing of a mask, and how this experience is related to the variables of interest --- if at all --- qualitative measures were used. Qualitative measures were also used to develop a more detailed and micro-level understanding of the processes by which the wearing of a mask might bring about these effects.

4.1.2.4 Self-reports or observational measures?

Given that the primary value of qualitative measures is their ability to capture something of the richness and complexity of human lived-experiences, there would seem to be little value in using qualitative measures in anything other than a self-report way. (The only exception to this might be where the observers are highly skilled clinicians with the ability to gain insight into a client's lived-world on the basis of observation and dialogue). Because quantitative measures are not so intimately tied to individual experiences, however, there is the potential for using them to assess behaviour from the perspective of an external observer as well as in a self-report way.

As with the qualitative/quantitative measures question, the question of self-report/observational measures is somewhat related to different epistemological positions. From a positivistic perspective, the great problem with self-report data is the fact that it is 'biased' by its subjectivity, and therefore there is often a desire to collect data from the more 'objective' position of an observer, whose measurements are open to external verification. From a post-positivistic, and particularly an existential-phenomenological perspective, on the other hand, subjective experiences are not a potential source of bias but the fundamental mode of Being-in-the-World which is prior to any 'objective' or scientific world (Merleau-Ponty, 1962). Hence, from this perspective, if one wants to describe something of human Being-in-the-World, even if it is 'only' a quantitative description, it is for the subjectively-experiencing individual to provide a description of that Being.

As with the quantitative/qualitative question, however, there is no reason why the use of self-report and observational measures should be mutually exclusive, as there is also here no exact one-to-one divide between the use of self-report and observational measures and different epistemological stances. Numerous positivistic psychologists base their work on self-report measures (e.g. Prentice-Dunn and Rogers, 1982); and phenomenologists like Rogers have also turned towards

using more observational approaches (see, for instance, McLeod, 1994). The reason for this, of course, is that many positivistic psychologists are interested in how people experience their world, just as many existential-phenomenological or humanistic psychologists do not discount the importance of non-subjectively experienced phenomenon, such as how other's perceive ones behaviour (see, for instance, Laing [1969]).

The question, therefore, is not so much of one's epistemological starting point, as one's psychological finishing point: that is, the area of human psychology that one is interested in. If one is interested in how people experience their world, then self-report measures would seem likely to give the most valid and reliable findings, as the experiencing-individual is almost certainly going to have the best vantage point from which to assess their own experiences. If, on the other hand, one is interested in individual's behaviours, then it would seem to make more sense to use observer ratings, as here the behaving-individual may find it more difficult to stand 'outside' of themselves and rate their behaviours with any degree of accuracy.

For the purposes of this study, then, self-report measures were used to assess those phenomenon which were primarily experienced at a subjective level: for instance, feelings of identifiability, awareness of one's public self, desire for establishing one's uniqueness. With inhibition and disinhibition, however, where the concern was primarily with changes at a behavioural level, observer ratings seemed more appropriate.

4.1.2.5 Between-participant or within-participant design?

As with the question of experimental or non-experimental design, this is again an either/or question. A between-participant design has a number of advantages. Perhaps the most significant of these is that it avoids the most serious handicap of within-participant designs: that of sequencing effects (Christensen, 1997). Obviously, this can be counterbalanced for in a within-participants design, but one is still left with the problem of possible non-linear sequencing effects. One may also be left with the problem of having to try and interpret complex higher order interactions between 'sequence' and the variables of experimental interest.

Another important advantage of a between-participants design is that demand characteristics are less likely to be prevalent. Along with sequencing effects, a major

limitation of a within-participants design is that, by asking participants to perform a task in both masked and non-masked conditions, and then to respond to particular self-report measures, the purpose of the study is likely to be fairly obvious to participants. This is both the fact that the study is looking at the effects of wearing a mask, and that the study is interested in a particular set of dependent variables.

At the same time, a between-participants design would not entirely eliminate demand characteristics, as the participants would still be aware of the dependent measures of interest; and the participants in the masked condition could still be left wondering what the purpose of their wearing a mask was. Indeed, a between-participants study could introduce a more systematic bias into the results in that participants in the masked condition might have very different expectations as to the aims of the study than participants in the non-masked condition.

In the present study, a within-participants design was adopted. This was partly because there was no expectation of significant 'carry-over' effect: i.e. that wearing a mask after not wearing a mask would have a substantially different effect from wearing a mask prior to not wearing a mask. It was also partly for practical reasons: only a limited number of Open University students could be 'run'[6], and therefore, a within-participants study, by taking out individual differences from the error term, would be more likely to arrive at significant findings.

The main reason for using a within-participants design in this study, however, was so that detailed qualitative data could be obtained on how the experience of wearing a mask directly compared with the experience of not wearing a mask. Obtaining such comparative data would have been possible in a between-participants design, but because of the multi-dimensionality of qualitative data, it is relatively difficult to compare across conditions. For instance, if 40 percent of masked participants in a between-participants study said that they felt 'rather uninhibited' when wearing a mask, and 30 percent of non-masked participants said that they felt 'not that inhibited', it would be very difficult to make any real comparison between these two findings. By contrast, if 25 percent of participants in a within-participants design

[6] Because of the organisation of the Open University summer school, students were only available as experimental participants for three hours a week.

say that they felt 'more inhibited' when they were wearing a mask, then the effects of wearing a mask would be much clearer. Also, because participants in a within-participants design have experienced exactly the same conditions both masked and unmasked, they should also find it easier to identify exactly what it is about wearing a mask --- or, indeed, whether it is the mask at all --- that has brought about a particular effect.

There is another potential advantage of a within-participants design that is rarely mentioned in the literature: greater catalytic validity. In a between-participants design, only the experimenter is able to learn from the participants' responses, as only she has access to the necessary comparative data from which to identify the effects of the independent variable. By contrast, in a within-participants design, the participant has experienced both conditions for herself. Hence, she has an opportunity to also learn what effects the independent variable might bring about.

4.1.2.6 Demand characteristics and deception

Given the design decisions that had been made up to this point --- particularly the choice of several self-report measures and a within-participants design --- there was clearly the possibility that the way in which participants responded could be influenced by demand characteristics. Orne (1970) defines these as, 'the totality of cues which convey an experimental hypothesis to the subject' (p.9). According to Orne, experimental volunteers hope and expect that the study they are participating in will contribute to the development of scientific knowledge and human welfare. Hence, they have a stake in ensuring that the study is successful. If, then, they are aware of the experimental hypothesis --- and, as active problem-solvers, Orne suggests they are likely to try to find out --- they may attempt to ensure the success of the study by responding in such a way as to validate the experimental hypothesis. There is also the possibility, as highlighted by Christensen (1997), that participants may respond in ways which validate the experimental hypothesis out of a desire to be positively evaluated by the experimenter.

To counteract the problem of demand characteristics, the most commonly advocated approach within the experimental social psychological literature is to introduce some element of deception into the experimental design (e.g. Aronson, Brewer and Carlsmith, 1985). For instance, along the lines of Kellerman and Laird (1982), participants in the present study could have been told that they were

taking part in a 'perception task', and that the masks they were being asked to wear were fitted with particular lenses that may or may not affect the way they behaved.

The use of deception, however, raises some significant ethical concerns. Aside from the general issues that Kelman (1970) raises --- the fact that deception would not be considered ethical outside of an experimental environment, that it contributes to a general ethic of mass systematisation, and that it reduces trust in psychologists --- there are some concerns which are of particular relevance for the present study.

First, Kelman (1970) writes that deception 'deprives the subject of the opportunity to choose whether or not he wishes to expose himself to the risks that might be entailed' (p.89). This is of particular relevance to the current study, where a number of authors have highlighted the possible dangers of working with masks (e.g. Gersie, 1994). Here, then, it feels particularly important that participants can make informed choices about whether or not they wish to continue taking part in a study. Even Christensen (1997), who argues that deception is usually more of a problem for the experimenter than the participant, does acknowledge that it raises special ethical concerns when it involves behaviours that may result in harm to the research participant.

The ethical problems of using deception in the present study are further compounded by the degree of deception that would be required for it to be 'effective'. Mask-wearing is not an everyday activity. Hence, if participants were asked in a laboratory setting to put on a mask, they would almost certainly consider it as a significant part of the experimental design. To convince them otherwise would almost undoubtedly require numerous deceptions and false explanations. This would then further reduce the participants' autonomy in deciding whether or not they wish to continue participating in the study.

Along with ethical concerns, however, there are also methodological reasons why the use of deception might not be particularly appropriate in this study. Given that one of the aims of this study is to obtain detailed qualitative data regarding participants' actual experiences of wearing a mask, it is unlikely that this is going to be forthcoming if the participants feel that the experimenter has deceived them. This is not only because they may feel resentful towards the researcher, but also because they may not feel particularly trusting

or open towards someone who has 'deceived' them into behaving in a particular way. If the desire, then, is for the participants to respond in an open, honest and self-revealing way, it would seem important that this mode of relating is 'modelled' by the researcher.

Furthermore, as Kelman (1970) argues, a highly ambiguous study with numerous hidden details and contradictory cues may well lead participants to spend more time trying to make sense of the study's aims than they would do otherwise. Because of the ambiguity of the aims, the interpretations that the participants come up with are also more likely to be idiosyncratic, and therefore alter their responses in unpredictable ways. Finally, in the 'real world', individuals are very rarely told that the mask they are about to wear will alter their perception or bring about some other highly improbable consequence. Hence, introducing a deceptive cover story may actually serve to lessen the ecological validity of the study.

What, then, are the implications for the present study if its aims are not disguised, with the result that some of the participants may become aware of the experimental hypotheses?

In support of Orne's (1970) hypothesis, several studies have found that participants' behaviour tends to conform to the particular experimental hypothesis 'disclosed' to them (e.g. Levy, 1967). However, there are also a number of studies which have found participants displaying reactance (Brehm, 1966) against the disclosed experimental hypothesis. Horowitz and Rothschild (1970), for instance, found that hypothesis-informed role-playing participants in a 'conformity' experiment tended to conform less than un-informed participants. There are also studies which show that being aware of the experimental hypothesis makes no difference to participants' responses (e.g. Laird et al, 1994).

Hence, whilst there is evidence that being informed about the purpose or hypothesis of an experiment may significantly affect a participant's behaviour, there is no evidence that this will be in the direction of the experimental hypothesis. Indeed, as Berkowitz and Tróccoli (1986) conclude, the possibility of participants behaving in a disconfirmatory way 'could generally be a more serious threat to the internal validity of the experiment than demand compliance' (p.348). Furthermore, as Kruglanski (1975) argues, the deliberate disclosure of an experimental hypothesis is not the same as a participant coming to guess this hypothesis for herself.

Hence, the fact that the former has been shown to affect participant's behaviour does not necessarily mean that the latter will too.

Similarly, a number of studies have found a positive relationship between participants' tendency to behave in accordance with the experimental hypothesis, and their awareness of the experimental hypothesis, as assessed by post-experimental inquiry (e.g. Page and Lumia, 1968). Indeed, Page and Lumia's study went so far as to show that the moment at which participants tended to behave in accordance with the experimental hypothesis was also the point at which they tended to become aware of the experimental hypothesis. Again, however, there are studies which have not confirmed these findings (e.g. Page and Scheidt, 1971), and there are also studies which have found the inverse relationship (e.g. Berkowitz, 1980, unpublished study reported in Berkowitz and Tróccoli, 1986). Furthermore, because this relationship is correlational, it is not possible to say whether an awareness of the experimental hypothesis leads to hypothesis-confirming behaviour, or whether individuals who behave in accordance with the experimental hypothesis then start to assume that this must be the point of the experiment.

A third source of data in support of the demand characteristics hypothesis comes from role-playing simulations and non-experiments, which show that non-experimental participants can simulate or guess how experimental participants would react (e.g. Orne, 1970). However, as Berkowitz and Tróccoli (1986) write, to conclude from this that the experimental participants' behaviour is therefore an 'act' is illogical. They write that it would be like assuming that because many students would predict that male viewers will become aroused by sexually explicit material, any actual arousal must be a consequence of demand characteristics.

The demand characteristics hypothesis has also been criticised on more theoretical grounds. Berkowitz and Troccóli (1986) challenge the assumption that many experimental participants feel motivated to serve science or human welfare; and argue that, if they were concerned with serving science, they might be more likely to inhibit untruthful responses rather than promulgating them. Second, they question the assumption that the participant is an actively curious 'detective', suggesting instead that many participants may be quite ready to accept the experimenters' account of an experiment. Third, they propose that relatively few

participants are actually able to guess the hypothesis of most studies, even where the manipulations are fairly obvious, such as in the Velten mood induction procedure.

From a more qualitative, post-positivistic perspective, there is also a problem with the philosophical grounds upon which the demand characteristics hypothesis stands. If it is argued that an awareness of the experimental hypothesis can 'bias' the participants' response, then this is based on the assumption that there is some kind of assumption-free and un-biased way in which a participant can respond to a psychological experiment. From an existential or post-modern perspective, such an assumption is clearly untenable: a participant will always attribute meanings to a particular context, and there is no way of creating an experimental paradigm which is meaning-less.

Furthermore, from these post-positivistic perspectives, the manner in which an individual ascribes meanings and expectations to their world is an essential, non-peripheral, aspect of their being. Hence, the way in which a participant makes sense of a particular experimental context is not just an 'artefact' to be avoided or excluded, but a fundamental piece of information about how the participant engages with her world. If, therefore, a number of participants assume that the purpose of the present study is to see if they become less inhibited when wearing a mask, then this is not necessarily a source of experimental error. Rather, it may indicate something very relevant as to how participants will construe --- and respond to --- the act of wearing a mask in a 'real world' setting.

Based on their review of the literature, Berkowitz and Tróccoli (1986) conclude that 'the widespread concern over the supposedly biasing effects of demand characteristics is somewhat exaggerated' (p.337). Whilst they do no not flatly refute the demand characteristics hypothesis --- suggesting that some participants may be motivated to confirm the experimenter's hypothesis --- they write that it is likely to have 'only a minor influence on the subject's behaviour in experimental settings' (p.347). Ten years later, Christensen (1997) presents a very similar conclusion.

The implication of this conclusion is that participants' awareness of the experimental hypothesis should not necessarily invalidate the research findings. Nevertheless, the approach used by Diener et al (1980) --- to identify which participants are aware of the

experimental hypothesis and then see if this relates to their responses --- would seem a useful safeguard. If it transpires that a positive relationship does exist between awareness of the experimental hypothesis and a tendency to respond in accordance with it, then this would not necessarily suggest that the awareness has 'caused' the hypothesised responses. However, it would suggest that this is one possible means of accounting for the findings.

4.1.2.7 Experimenter-expectancy effects

Another potentially serious source of 'bias' in the present study is experimenter-expectancy effects: 'The influence of the experimenter's expectations regarding the outcome of an experiment' (Christensen, 1997, p.249). The veracity of this effect has been demonstrated in hundreds of studies (Rosenthal and Rosnow, 1991); and, in a meta-analysis of 345 studies, Rosenthal and Rubin (1978) calculated a mean effect size of expectancy bias of .33. However, there is still no clear understanding of exactly how or why this effect occurs, though it is thought that non-verbal cues from experimenter to participant may be one of the most important factors (Christensen, 1997).

In attempting to minimise the possibility of experimenter-expectancy effects, Rosenthal and Rosnow (1991) have suggested three main strategies. The first of these is minimising experimenter-participant contact, through such procedures as automation. With respect to the present study, however, this is not desirable, primarily on ethical grounds. Given that it has been suggested that some individuals may have a negative reaction to the wearing of a mask, it would seem essential to have someone present in the room with the participant at all times, in the event that they do experience some negative reaction. Furthermore, as Aronson et al (1985) argue, the presence of an experimenter may actually reduce bias by ensuring that there is a standardised understanding of the instructions, and detecting any possible unanticipated phenomenon that may be biasing the participants' responses.

The second alternative suggested by Rosenthal and Rosnow (1991) is to have the study run by a 'blind' experimenter. Again, however, this is not really possible in the present study, as there would be no way of keeping an experimenter blind to the fact of whether or not the participant is wearing a mask. Furthermore, as Aronson et al (1985) argue, a blind experimenter is almost

inevitably going to be wondering what the study is about themselves, and will therefore have their own set of expectations. These may then also affect the participants' responses, and in ways which are less easy to predict or interpret than the experimenter's own expectancies (Kintz, Delprato, Mettee, Persons and Schappe, 1970).

A third possibility proposed by Rosenthal and Rosnow (1991) is that of using a number of different experimenters, and then seeing whether there are any significant differences between the results from the different experimental groups. The problem here, however, is primarily a practical one: that of having two or three different experimenters 'on call' at any one time so that the experimenter can be randomly varied.

The approach used in this study, therefore, is that recommended by Aronson et al (1985): the 'partially blind technique'. The basic aim here is to try and reduce experimenter-expectancy effects as far as possible, without introducing the kind of empirical or practical difficulties outlined above that may end up further confounding the results. One of the main strategies in this technique is to assign participants to a particular condition or order as late as possible, so that the time in which expectancies can be conveyed to the participant is minimised. To reduce the possibility of conveying non-verbal messages to the participants in the present study, eye-contact was also kept to a minimum, by ensuring that participants always talked directly to the cameras.

Such an avoidance of eye-contact, or other forms of researcher-participant interaction, is clearly not possible in the qualitative interviews. However, the epistemological position from which such methodologies derive makes such interactions less problematic, as knowledge is considered fundamentally intersubjective (Kvale, 1994). Hence, the idea that it is possible to collect data in such a way that it is un-tainted by the subjectivism of the researcher or others would be considered something of a positivistic fantasy.

At the same time, Kvale (1994) and other advocates of qualitative research (e.g. Moustakas, 1994) do not ignore the possibility that the researcher's own perspective might limit the validity of the data that is collected. Instead of suggesting, however, that the researcher should be 'taken out of the equation', what they consider important is that the researcher develops an awareness of their own biases. Through such an awareness, it is argued

that the researcher then has the possibility of 'bracketing' their own assumptions and expectations: both in the process of gathering the data and in the analysing it. This is what Kvale calls a 'perspectival subjectivity', and he contrasts it with a 'biased subjectivity' in which the researcher imposes their own assumption on the data in a pre-reflective way.

4.2 METHOD

4.2.1 Design

This study used a repeated measures design with one independent variable of interest: masking (masked vs. non-masked conditions). The study used quantitative self-report measures, quantitative behavioural measures and qualitative interview data to test the hypothesis outlined in section 3.3.

It was hypothesised that, in the masked condition, participants would rate themselves as less identifiable and less aware of their public selves than in the non-masked condition. However, it was predicted that masked participants would feel no more aware of their private selves, nor experience greater alterations in their experience, than participants in the non-masked conditions. It was also predicted that there would be a positive correlation between participants' scores on the public self-consciousness scale, and the extent to which they experienced a reduction in public self-awareness when masked.

With respect to disinhibition, it was predicted that participants would be more antipathetic to their observers, and disclose more intimate information to them, when wearing a mask. However, it was also predicted that individuals who scored high on a self-esteem inventory and a desire for individuation inventory would experience the wearing of a mask as more inhibiting as compared with participants who scored low on these inventories. It was also predicted that participants who scored high on self-esteem would find the wearing of a mask less pleasurable than those participants who scored low on this measure.

Measures of desire for uniqueness, awareness of personal identity, and conspicuousness were also introduced as dependent measures as a preliminary means of seeing whether the wearing of a mask had any affect of these variables.

Finally, it was predicted that the qualitative data would provide empirical evidence in support of the above hypotheses.

4.2.2 Participants

Participants were Open University undergraduate students taking part in an 'Introduction to Psychology' summer school module at Sussex University. Thirty-five of these participants were women (79.5%) and nine (20.5%) were men. The age of the participants ranged from 23 to 56, with a mean of 36.8. The participants' occupations varied broadly, with a predominance of 'white collar' professionals, including nurses, teachers, counsellors, management consultants and policemen.

To recruit participants for the study, a short talk (of approximately one minute's duration) was given to the Open University students at their initial course briefing (see appendix 4a). In this talk, students were told that the study was part of a thesis in psychology investigating the effects of mask-wearing and that the study would primarily involve, 'talking to a video camera, once with a mask on, and once without a mask. The students were also told that they would be paid two pounds for attending, and that if they were interested they should sign up their names on a sheet which would be posted in the foyer of one of the residential buildings (see appendix 4b).

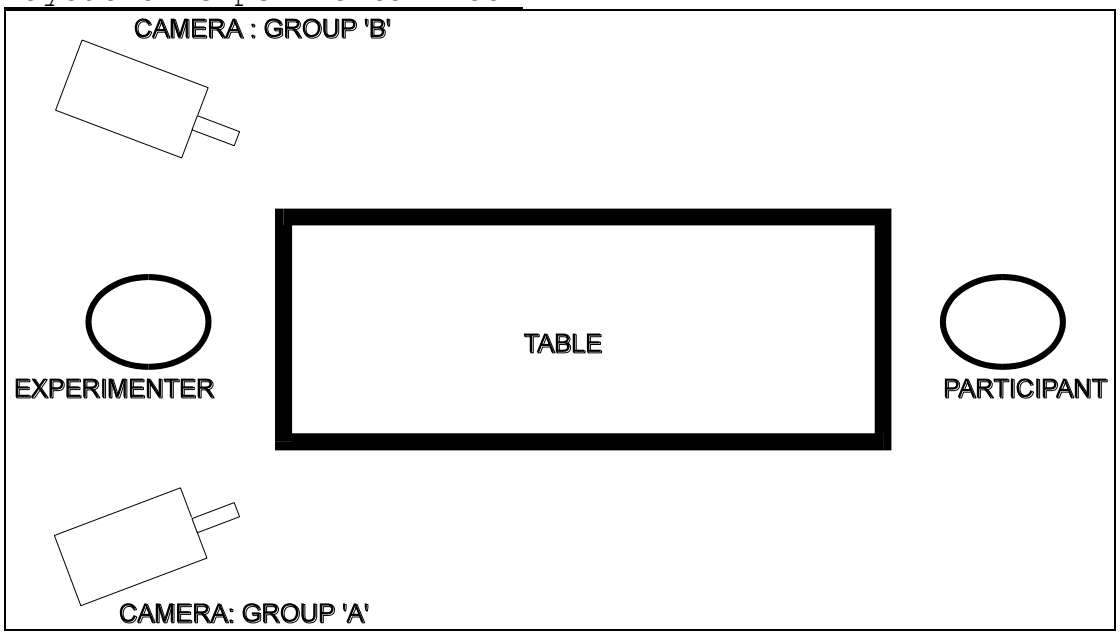
Approximately fifty participants signed up over the eight weeks that the study was run. Approximately five of these did not turn up at the time they had chosen. One student began the study, but chose not to continue mid-way through her first, non-masked condition, as she said she felt uncomfortable talking to a video camera. All information and video tape from this participant was deleted. All other students who signed up to participate in the study did so and completed all parts of the task.

4.2.3 Apparatus and Materials

The study was conducted in a medium-sized classroom (able to comfortably accommodate a seminar group of around fifteen students). The room was organised such that the student sat at one end of a long table, facing two V.H.S. cameras, and the experimenter at the other end (see diagram 4.1). The camera to the left of the experimenter was clearly labelled 'group "B"', whilst the camera to the right of the experimenter was clearly labelled 'group

"A"'. This was to ensure that students felt that they were talking to different groups of students in the two different experimental conditions. The reason for this was to minimise the possibility that participants would carry-over a sense of identifiability from the first condition to the second condition.

DIAGRAM 4.1
Layout of experimental room



Post-experimental interviews were carried out with an Aiwa stereo cassette recorder and a standard table microphone.

The mask used for the study was a plastic, white mask, around 24cm in height and 14.5cm in width (able to fit snugly over an average-sized face), bought from a theatrical/'fancy dress' shop (see illustration 4.1). Within dramatic circles, this type of mask is generally referred to as a 'neutral' or 'universal' mask. Drama improvisation teachers like Jacques Lecoq use this type of mask to help students 'unlearn' preconceived physicalities, and to attain a way of being that is 'unprejudiced' whilst focused and alert (Frost and Yarrow, 1990). This is described as a condition in which the individual, 'becomes a blank page.... Everything is erased so he can start from scratch, seeing things for the first time' (Lecoq, quoted in Frost and Yarrow, 1990, p.117).

Illustration 4.1
'Neutral' mask

Two types of questionnaires were used for this study. The first questionnaire (the 'post-task questionnaire') asked participants to indicate on ten-point Likert-type scales how 'true' or 'false' eleven randomly ordered statements were in describing how they had felt during the previous set of tasks (appendix 4c). This is similar to the questionnaire used by Prentice-Dunn and Rogers (1982).

These eleven statements were used to measure two of the main dependent variables, and the additional dependent variables of interest.

To measure levels of identifiability, two statements were used: 'I've felt identifiable' and 'I've felt anonymous'. Assuming inter-item reliability, total identifiability scores would consist of identifiability scores plus anonymity scores reversed (i.e., anonymity scores subtracted from eleven), all divided by two. (This formula was used so that the combined scores would remain comparable with other dependent measures on ten-point scales.)

To measure levels of public self-awareness, Prentice-Dunn and Rogers' (1982) two items --- based on Fenigstein et al's (1975) Public self-consciousness Scale --- were used, in a slightly modified form. These were as follows: 'I've been concerned about what the observers might think of me', and 'I've been somewhat concerned about the way I've presented myself to the observers'. The only differences between the items used in this study and the ones used by Prentice-Dunn and Rogers is that the terms

'experimenter' and 'memory subjects' in the original have been replaced by the term 'observers'. Assuming inter-item reliability, total public self-awareness scores would consist of averaged scores from both items.

To measure the participants' desire to individuate themselves, the following statement was used, 'I've been concerned with emphasising my uniqueness.' Similarly, to measure the participants' awareness of their personal identity, the following item was used: 'I've been aware of my personal, individual identity.' Neither of these items have been used previously in the literature, but were both considered relatively direct means of assessing these two variables.

To measure levels of private self-awareness, Prentice-Dunn and Rogers' (1982) two items --- based on Fenigstein et al's (1975) Private self-consciousness Scale --- were again used. This time, however, it was in unmodified form. The two items were as follows: 'Generally, I've been very aware of myself', and 'Rather than thinking about myself, my mind has been concentrated on what is going on around me.' Assuming inter-item reliability, total private self-awareness scores would be calculated by adding the scores on the first item to the reversed scores on the second item, and dividing by two.

To explore the hypothesis that the mask will also not increase an individual's 'altered experience' --- the other component of the internal state of deindividuation according to Prentice-Dunn and Rogers (1982) --- the following item was added: 'My thinking has felt somewhat altered.' This measure is not directly used by Prentice-Dunn and Rogers, but is one of the items which has been consistently found to load most highly on the 'altered experience' factor.

To assess whether participants felt more conspicuous in the mask-wearing condition, the following statement was used: 'I've felt conspicuous.'

Finally, to assess whether levels of self-esteem were related to enjoyment of wearing the mask, the following item was devised: 'I've found the task pleasurable.'

The second questionnaire that was used (the 'individual differences questionnaire') was given to participants at the end of the study, and consisted of three personality inventories (see appendix 4d).

The first of these inventories was the revised self-consciousness scale (Scheier and Carver, 1985) which consists of 22 items with a four-point response format. This scale consists of three sub-scales: public self-consciousness (items 2, 5, 10, 13, 16, 18, 20), private self-consciousness (items 1, 4, 6, 8 [reversed], 12, 14, 17, 19, 21) and social anxiety (items 3, 7, 9, 11 [reversed], 15, 22). Only the data from the public self-consciousness scale will be used for the present study.

The second of these inventories was Maslach et al's (1985) Individuation Scale, which is 'designed to assess people's willingness to engage in behaviours that publicly differentiate themselves from others' (p.729). The scale consists of twelve items with a five point Likert-type response format.

The final personality inventory was Rosenberg's (1965) self-esteem scale, which was designed to measure how much an individual feels that she is a person of worth (p.31). This scale consists of ten items, with a four point response format. Scores from items one, two, four, six and seven are reversed on the final tallying, and positive scores indicate higher self-esteem.

4.2.4 Procedure

Volunteers were welcomed into the room, thanked for coming along, and then seated. Once comfortable, the basic design of the study was explained to them: (full instructions can be seen appendix 4e):

> Each of the two short videos you are about to make will be watched by a small group of Sussex University undergraduate students. The two different videos will be seen by two different sets of students: group A and group B [experimenter points to cameras].
>
> When you are being videoed, please try and bear in mind the students who will be watching the video tapes, and try to talk directly to them.

The participants were informed that there was no deception involved in the study. They were told that they would not be surreptitiously filmed by the cameras without their knowledge, that the video footage would be kept confidential within a confined group of people, and that they were absolutely free to withdraw from the study at any point. Finally, they were told that there were no 'right' or 'wrong' answers, and the more honest they

could be, the clearer sense it would give the researcher of what they might be experiencing or not experiencing.

Participants were then given an opportunity to say whether or not they wished to continue. If they wished to, they were then randomly allocated to one of four orders. This was dependent on whether they were wearing a mask first or second, and whether they would first talk about students' social lives, or students' financial matters. These two different topics were used so that students did not have to talk about the same topic in both conditions, as it was felt that they might simply repeat themselves the second time around. The four different orders were therefore as follows:

- non-masked (financial matters) followed by masked (social lives).
- masked (financial matters) followed by non-masked (social lives).
- non-masked (social lives) followed by masked (financial matters).
- masked (social lives) followed by non-masked (financial matters).

In order one, participants were first asked to face the 'group A' camera and to tell the students who would be watching the videos something about themselves. As a means of standardising their responses, they were asked to make ten statements in the form of 'I am...'. Participants were told that the statements could be as revealing or as non-revealing as they wanted and that they should take as little or as much time as they needed. They were also told that they should try not to refer to whether or not they were wearing a mask as one of their 'I am' statements (so that subsequent coders would be blind to the participants' condition). If they did not have any questions, they were then told that the camera was being turned on, and that they should begin the task.

When they had finished this, they were then asked to talk to group 'A' for a maximum of two minutes about their views on a particular topic. They were informed that it was not a problem if they ran out of things to say, but that the camera would run for the full two minutes. If they did not have any questions, they were then given the following topic: 'How fortunate or unfortunate do you think full time University undergraduates --- like the

students you are talking to --- are, with respect to financial matters?'

Once they had completed this task, they were then asked to spend a few minutes filling in the first post-task questionnaire.

To begin the second condition, participants in order one were then asked to put on the mask that was lying on the chair (out of view) next to them. Once they had comfortably secured it, they were then asked to face the group 'B' camera, and to repeat the 'I am...' exercise. Having done so, and keeping the mask on, they were then asked to repeat the 'talking for two minutes...' exercise. However, this time they were given the following topic: 'How fortunate or unfortunate do you think full time University undergraduates --- like the students you are talking to --- are, with respect to their social lives?' Participants were then asked to take the mask off and complete a second post-task questionnaire.

Having done so, the participants were then asked if they minded talking about their experience of taking part in the study 'at a more general level'. If they said they didn't mind (and none of the participants declined this part of the study) a tape recorder was then turned on, and a brief (five to fifteen minutes) semi-structured qualitative interview was conducted with the participants. This interview also served as the post-experimental debriefing, which aimed to clarify any misconceptions that the participants may have had about the nature of the study.

This interview was concerned with two main research questions: what differences did the participants experience between the masked and non-masked conditions; and, what did they think the aims of the study might be. The interview guide thus consisted of the following three interview questions and one follow-up probe:

- What did you think the aims of the study might be?

- What did you expect it to be like, wearing a mask?

- To what extent did your experience of wearing a mask match your expectations?

- [probe] Were there any other ways in which the experience of wearing a mask was different from the experience of not wearing a mask?

This interview was conducted along the lines of a qualitative or phenomenological interview (Kvale, 1996; Moustakas, 1994). Here, the aim is to enter into a dialogical relationship with the interviewee, such that aspects of the interviewees' phenomenologically-experienced lived-world can emerge: 'to let that which shows itself be seen from itself in the way in which it shows itself from itself' (Heidegger, 1926/1962, p.58).

To achieve this phenomenological goal, a qualitative interview requires that the interviewer attempt to 'bracket', as far as possible, previous assumptions and expectations (Moustakas, 1994), and engage with the interviewees in an open and attentive way. The qualitative interviewer is also required to engage primarily at the descriptive level, continually attempting to clarify the interviewees' lived-experiences and lived-meanings as they emerged through the dialogue. Along with the basic interview questions, therefore, empathetic reflections, probes, gentle challenges, requests for clarification, nods and 'mmms' were all used as a means of furthering an understanding of the interviewees' lived-world (Kvale, 1996).

Attempting to condense, interpret and summarise the meaning of what the interviewees said was also a central part of the qualitative interviewing process. This is to ensure high 'respondent validity' (Kvale, 1994): i.e. that what the respondent is interpreted as saying is what the respondent actually meant. This is because, by reflecting back to the respondent what she is understood to have said,

> the interviewee then has the opportunity to reply, for example, 'I did not mean that' or 'That was precisely what I was trying to say' or 'No, that was not quite what I felt. It was more like...' This dialogue ideally continues till there is only one possible interpretation left, or it is established that the subject has multiple, and possibly contradictory, understandings of a theme. This form of interviewing implies an ongoing 'on-the-line interpretation' with the possibility of an 'on-the-spot' confirmation or disconfirmation of the interviewee's interpretations. The result can then be a 'self-correcting' interview. (p.189)

Finally, participants were told that the study was interested in looking at whether different types of people experienced wearing a mask differently, and were

therefore asked to complete the individual difference questionnaire.

In order two, participants similarly talked about students' social lives in the first condition and financial matters in the second, but wore a mask for the first trial and did not wear a mask for the second. In order three, participants were non-masked in the first condition but talked about students' financial matters, and in the second condition were masked and talked about students' social lives. In order four, participants were masked in the first condition and talked about students' financial matters, and were unmasked in the second condition and talked about students' social lives.

4.2.5 Methods of Analysis

4.2.5.1 Quantitative

To analyse the participants' prose and the 'Who am I...' statements, each of these responses were transcribed from the videotape by a colleague of the researcher. These were then given independently to two Sussex University undergraduates judges, blind to the aims of the study, for coding and rating[7].

To rate the prose data (on student's social lives and financial matters), judges were asked to rate on a nine-point scale how positive or negative they felt that each of the statements that participants made were towards full-time university undergraduate students (where one equals extremely negative, five equals neither positive nor negative, and nine equals extremely positive). Instructions to the judges are in appendix 4f, and an example of the prose is in appendix 4g. It was emphasised to the judges that they should be rating these statements in terms of how positive or negative they were towards students (i.e. how sympathetic or antipathetic they were), rather than on how positive or negative the

[7] Initially, as stated to the participants, it had been intended that these videotapes would be watched and coded by two groups of Sussex Undergraduate students. It soon became apparent, however, that such a process would be problematic, as the judges would then be aware of whether the participants were masked or non-masked. An alternative, to have the groups of Sussex students listen to the videotapes only, might also have been problematic, as the masks may have muffled or distorted the participants' responses, and again, therefore, led to biases in the coding process. Therefore, it was decided to work from transcripts alone.

participants were about students (e.g. whether they thought that students were fortunate or unfortunate in their financial matters).

Inter-rater reliability on the 88 items of prose was relatively low, with an alpha coefficient of .64. Given, however, that this was a first attempt to rate participants' responses in this way, this was considered of borderline acceptability (although normally only an alpha coefficient of .70 or higher would be considered acceptable). However, any results from these ratings would need to be treated with substantial caution. Total scores of 'positive or negative feelings towards the students' were calculated by averaging the two judges' ratings.

In analysing the 'I am...' statements, it was apparent from the transcripts that many participants had simply repeated the first set of statements when asked to describe who they were the second time around. Because of this, only the first set of each participants' 'I am...' statements were used. This meant that the 'I am...' statements could be analysed between-participants --- comparing masked and non-masked conditions for each of the first set of 'I am...' statements --- rather than within-participants.

For the 'I am...' statements, judges were told that: 'In each of the following sentences, Open University psychology undergraduates, whilst attending summer school at Sussex University, were asked to say something about themselves by making statements in the form of "I am..."'. Instructions to the judges are in appendix 4h and 4i. Samples of the participants' statements are in appendix 4j. Judges were asked to perform both a rating and a coding on each of the 'I am' statements.

First, they were asked to code each of the 'I am...' statements into one or more of the thirty categories developed by Gordon (1968). This system of categorisation consists of eight superordinate categories --- 'ascribed characteristics', 'roles and membership', 'abstract identifications', 'interests and activities', 'four systemic sense of self', 'personal characteristics', and 'external meanings' --- each broken down into further subordinate categories (see appendix 4i). The aim of this coding was to see if there were any general differences in the responses that participants gave in the masked, as opposed to non-masked conditions.

In terms of inter-judge reliability, there was something of a discrepancy in the way that the judges had categorised these statements. One of the judges had tended to put the statements in as many categories as possible, whilst the other judge had tended to put the statements in just one category. In 82.5 percent of the 'I am...' statements, however, there was agreement between the latter judge's coding and at least one of the former judge's codings. This was taken as an agreed coding. In the 17.5 percent of the statements where there was a discrepancy between the two judges, a third judge was asked to decide which of the codes they thought was most appropriate.

To get a more specific measure of the intimacy of the self-disclosures, participants were asked to rate each of the 'I am...' statements on a nine-point scale of 'disclosure intimacy', where one equals 'little information given' and nine equals 'extremely intimate information'. This nine-point 'disclosure intimacy' scale was taken from Chaikin, Derlega, Bayma and Shaw (1975). As with the Chaikin et al study, coders were asked to rate the intimacy of the disclosures according to two major criteria: first, the uniqueness of the material disclosed; and second, how guarded an individual might be in disclosing this information.

The inter-rater reliability on disclosure intimacy was unacceptably low, with an alpha coefficient of just .35. To improve this, one possibility might have been to bring in a third or fourth judge to re-rate the levels of disclosure. However, given the very low reliability between the two judges, it did not seem particularly likely that further judges would bring the reliability up to an acceptable level. Furthermore, an initial calculation of both judges' ratings found virtually no difference between ratings of disclosure intimacy in the masked condition ($\underline{M}$ = 3.01 and 4.72) as compared with the non-masked condition ($\underline{M}$ = 3.08 and 4.66). For these reasons, it was decided not to pursue these ratings of disclosure intimacy further, and to drop them from the analysis.

To assess the reliability of the dependent measures, inter-item reliability on the post-task questionnaire was calculated for the combined items. For measures of public self-awareness, there was an acceptably high alpha coefficient of .84 between the two items attempting to measure this variable. The scores from these two items were therefore averaged to form a total public self-awareness score. However, the alpha coefficient between

the items 'anonymity' and 'identifiability' was just .64, and for this reason, these two items were treated as separate variables. Also, the inter-item reliability for the two items intended to measure private self-awareness was very low, with an alpha coefficient of -.03. Again, therefore, these two items were treated as separate dependent variables.

Bar charts of the frequency distribution on the dependent variables showed acceptable levels of normality. All scores from the self-report measures (with the public self-awareness scores combined) and the ratings of participants' prose were therefore analysed using a repeated measures multivariate analysis of variance on version seven of SPSS. The one within-participants independent variable was masking (masked vs. non-masked conditions). Two between-participants independent variables were also introduced into the analysis: 'sequence' (masked first, non-masked second vs. non-masked first, masked second) and 'topic' (masked financial, non-masked social vs. masked social, non-masked financial).

Inter-item reliabilities on all three individual difference measures were high, with alpha coefficients of .83, .88, and .86 on the measures of public self-consciousness, desire for individuation, and self-esteem respectively.

To see whether there was a correlation between levels of public self-consciousness and reduction in public self-awareness, a 'reduction in public self-awareness' score was calculated for each participant by subtracting participants' public self-awareness score in the masked condition from their score in the non-masked condition.

To see whether there was a correlation between levels of self-esteem and enjoyment of wearing the mask, an 'increase in pleasure' score was calculated by subtracting participants' pleasure score in the non-masked condition from their score in the masked condition.

To see whether individuals' desire for individuation and levels of self-esteem were related to their experience of wearing a mask, participants were coded as being either 'high' or 'low' on these two measures, depending on whether their scores fell above or below the medians of 45.5 and 32 respectively (the four scores on the latter median were randomly distributed between 'high' and 'low'). These codings were then used to see whether

participants high in desire for individuation and self esteem would be more likely to experience an increase in inhibitions when wearing a mask (as assessed by the qualitative data) as compared with participants coded low on these measures.

To see whether there was any difference between the scores of those participants aware of the experimental hypotheses and those participants not aware of the experimental hypotheses, participants were coded as being either 'aware' or 'non-aware' of the identifiability-, PBSA-, and inhibition-hypothesis (identifiability-aware codings were used for both identifiability and anonymity scores). Participants were coded as being 'aware' if they either said that they thought the study was looking at whether masks decreased identifiability/PBSA/inhibitions, or if they said that they thought this might be one of the consequences of wearing a mask.

4.2.5.2 Qualitative

Audio tapes from the qualitative interviews were transcribed into Microsoft Word (version six) by the researcher and by two paid assistants. In transcribing the interviews, the assistants were instructed --- and the researcher attempted --- to transcribe the statements verbatim, including repetition, laughter, 'hmms', and interruptions (Kvale, 1996). However, transcribers were not asked to record length of pauses, in- and out-breaths, or overlapping speech.

Once all the transcriptions had been completed, their reliability was checked by comparing the text with the audio recordings, and any errors were corrected. At this point, the format of the transcriptions were also standardised, along the lines suggested by Silverman (1993):

- em dashes with no space before (---): interruptions and sudden changes in flow of statement (e.g. 'I thought the mask--- the thing about sitting in the room was').

- ellipses (...): pauses.

- square brackets ([]): used to insert observations, or brief interjections from other person (e.g. 'So it sounds like you felt really ['mmm'] hot in the mask.')

- round brackets ((...)) where material is not discernible.

- hyphens at beginning of text unit(-): denotes when interviewer is talking.

Each of the interviews was then broken down into text units (by placing a paragraph mark at the end of each unit). It was decided to use sentences as the basic text unit, on the basis that such text segments retain meaning 'even when they are encountered outside of their context' (Tedsch, 1990, p.117). Using sentences also created a more manageable number of text units than lines or words.

Text units from the qualitative interviews were then thematically analysed using the NUD•IST (Non-numerical Unstructured Data Indexing Searching and Theorising) computer program. NUD•IST does not provide assistance in the theoretical aspects of qualitative analysis: e.g. the development of codes and categories. However, what the program does do is to make the processes of coding and re-coding, categorising and re-categorising, searching, analysing and printing out the data more efficient. In contrast to manual qualitative analysis, for instance, the NUD•IST program can quickly re-assign data from one category to another, search for all instances of a particular phrase, or print-out all data where there is an 'intersection' of two categories.

In working with NUD•IST, the basic analytical process intrinsic to the program is one of thematic analysis or 'meaning categorization' (Kvale, 1996), in which the data is coded into a hierarchy of superordinate and subordinate categories --- or what NUD•IST refers to as 'nodes'. This process is not unlike Grounded Theory's (Glaser and Strauss, 1967) development of 'concepts' and superordinate 'categories'. However, in contrast to a grounded approach, NUD•IST does not stipulate whether the coding process should be 'top-down' or 'bottom-up'. This is important for the present study because there are several pre-defined hypotheses, which means that the analysis can not be wholly inductive.

Top-level categories in this qualitative analysis were therefore chosen prior to the analysis of the data. These were based on the central experimental concepts (identifiability, public self-awareness, inhibition), issues of possible relevance to the experimental hypotheses (experimental conditions, 'no difference'), and other areas of interest in this thesis (transformation, miscellaneous). To ensure that the research directly addressed the experimental hypotheses, second-level categories for the key dependent variables

were also pre-defined. These broke the qualitative data down into: reduction in the specified effect (e.g. feeling less identifiable), increase in the specified effect, non-presence of the effect, and intervening variables that participants felt may have increased, reduced, or negated this effect. Categories for the reduction and increases in the effect were then further subcategorised into explanations that participants gave for the effect, and the consequences that participants experienced as a result of that effect. Below this level, however, there was an attempt to be as open as possible to whatever categories might emerge from the data.

The process of coding consisted of converting each of the transcribed interviews into ASCII format, 'introducing' them into the NUD•IST program as separate 'documents', and then scrolling and reading through each of these documents a number of time to get a preliminary feel for the data. A sample transcribed interview can be seen in appendix 4k. Each of the text units was then coded into one or more of the third or second level categories (i.e. non-exclusively). Each of these categories was then examined in detail, and from them subordinate categories were developed. Where appropriate, these categories were then broken down into sub- and sub- sub- categories.

At this point, all the coding for each of the participants was printed out (see sample of coded interview in appendix 4l). The coding of each text unit for each participant was then re-examined, and any necessary re-codings, re-categorisings or the development of new categories were made. To cross-check, all the data was then printed out again, but this time by node rather than by participant (see sample of text units at single node in appendix 4m). Again, there was a process of re-coding and re-categorising the text units.

When this was completed, the entire data was printed out by node, and it was then given to a colleague to critically examine. This colleague was asked to look through the text units at each of the nodes, and to see whether she felt that these had been coded most appropriately or whether they should be placed at other nodes or new nodes should be developed. The feedback from this colleague led to a number of major and minor changes in the coding. For instance, many physical factors that had been coded at 'inhibition/increased' were removed from this node as the colleague felt that there was insufficient evidence that the participants did actually feel inhibited by these factors.

Once the text units had been re-coded, the data in each category was then transferred to Microsoft Word documents for the process of writing-up. As this proceeded, however, it became clear that there were still some inconsistencies in the coding. As the data was being transferred into a thematic narrative, therefore, there was an on-going process of re-coding and re-organising a small number of text units, in an attempt to attain categories that were as consistent and as meaningful as possible.

4.3 RESULTS

4.3.1 Quantitative

Multivariate tests using Wilks' lambda found a significant[8] main effect for the within-participants factor of masking, and a significant interaction effect for masking × topic (see table 4.1). No other effects were significant. A more detailed print out of the SPSS data analyses can be seen in appendix 4n.

[8] Throughout this thesis, a significance level of 0.05 will be used. For descriptive purposes, however, exact *p* values (to two significant figures) will also be presented.

TABLE 4.1
Multivariate tests for between-participant and within-participant variables

Variable	F	Hyp. df	Error df	p
Between-participants				
Sequence	1.48	11	29	.19
Topic	1.21	11	29	.32
Sequence × Topic	1.36	11	29	.24
Within-participants				
Masking	4.88	11	29	.00030
Masking × Sequence	1.53	11	29	.17
Masking × Topic	2.45	11	29	.027
Masking × Sequence × Topic	0.48	11	29	.90

Univariate tests on the masking factor found significant differences for four of the items: identifiability, anonymity, public self-awareness, and awareness of personal and individual identity. All of these were in the predicted direction (see table 4.2).

TABLE 4.2
Means, standard deviation, univariate F ratios and p values for masked and non-masked conditions

	Masked		Non-masked			
Measures	M	SD	M	SD	F(1, 39)	p
Identifi-ability	3.50	2.64	6.57	2.41	30.50	.000002
Anonymity	5.98	3.07	2.98	2.23	34.35	<.000001
PBSA	4.86	2.60	6.00	2.50	8.58	.0056
PRSA 1 (mind on what's around me)	4.73	3.10	4.34	2.72	0.40	.53
PRSA 2 (aware of myself)	7.11	2.17	7.55	2.17	1.2	.28
Altered experience	5.14	2.79	4.34	2.68	4.04	.051
Aware of personal identity	5.73	2.86	7.77	1.78	16.28	.00024
Desire for individua-tion	5.11	2.58	5.16	2.68	0.03	.86
Conspicuous-ness	5.02	3.11	6.30	3.12	3.27	.078
Pleasure	4.75	2.52	5.32	2.73	2.27	.14
Prose 'pos-itiveness'	5.79	1.25	5.45	1.13	1.54	.22

Univariate tests on the interaction between topic and masking found significant effects on two of the items: desire for individuation ($F[1, 39] = 6.07$, $p = .018$), and prose 'positiveness' ($F[1, 39] = 7.96$, $p = .007$). An analysis of the means suggests that the first of these

interaction came about because participants in both 'topic' conditions tended to rate themselves as having a greater desire to emphasise their uniqueness in the 'social lives' conditions (M = 5.66) as compared with the 'financial matters' conditions (M = 4.62). Similarly, the latter interaction effect seems to have come about because participants' prose were rated as more positive when discussing the students' financial matters (M = 5.96) as compared with their social lives (M = 5.28).

Contrary to predictions, the correlation between participants' scores on the public self-consciousness scales and the extent to which they experienced a reduction in public self-awareness when wearing the mask was not significant (r = .08, p = .62).

Contrary to predictions, the correlation between participants' scores on the self-esteem inventory and the extent to which they experienced an increase in pleasure when wearing the mask was not significant (r = -.065, p = .68). Other individual difference findings will be discussed in section 4.3.2.3.

The coding for the 'Who am I?' statements can be seen in appendix 4o. As this graph shows, there is very little difference in the coding of statements in the masked and non-masked conditions. The only exception to this is that twice as many statements in the non-masked condition were categorised under 29 ('immediate situation references').

Table 4.3 presents a comparison of the responses from hypothesis-aware and hypothesis-unaware participants for ratings of identifiability, anonymity, public self-awareness and inhibition. This shows that, for self-ratings of identifiability and public self-awareness, hypothesis-aware participants showed somewhat less change in the predicted direction than hypothesis-unaware participants. For ratings of anonymity and positiveness of prose, on the other hand, hypothesis-aware participants showed a very slightly greater change in the predicted direction than hypothesis-unaware participants.

TABLE 4.3
Mean differences between masked and non-masked conditions for aware and non-aware participants

	Aware			Non-aware		
Measures	mask M	n-m M	diff M	mask M	n-m M	diff M
Identifiability (n[aware] = 25)	3.96	6.16	-2.20	2.89	7.11	-4.22
Anonymity (n[aware] = 25)	6.48	3.40	3.08	5.32	2.42	2.90
PBSA (n[aware] = 24)	4.67	5.54	-0.87	5.10	6.55	-1.45
Prose 'positivity' (n[aware] = 33)	5.84	5.54	0.30	5.64	5.20	0.44

Note: 'mask' = masked condition, 'n-m' = non-masked condition, 'diff' = masked condition - non-masked condition

Finally, for descriptive purposes, the correlations between the dependent variables can be seen in Table 4.4. Exact p values (to the fourth decimal place) can be seen in the SPSS print-out in appendix 4n.

TABLE 4.4
Pearson correlations for dependent measures (n = 88)

	IDENT.	A	PB	PR1	PR2	AE	PI	IND	CS	PL
Anon	-.47*									
PBSA	.30*	-.21*								
PRSA 1: what's around me	-.00	.19	.24*							
PRSA 2: aware of myself	.25*	-.15	.33*	.01						
Altered exp.	.23*	.22*	.28*	.15	-.06					
Aware of personal id.	.58*	-.36*	.02	-.30*	.28*	-.40*				
Desire for ind.	.18	-.06	-.34*	.12	-.11	-.32*	.16			
Conspic.	.24*	-.32*	.42*	-.05	.49*	.14	.00	-.09		
Pleasure	.20	.05	-.35*	-.24*	-.03	-.42*	.42*	.25	-.26*	
Prose positive	-.11	-.04	-.08	-.02	.09	.00	.00	.34*	.04	-.05

Note: *p < 0.05.

4.3.2 Qualitative

A table of nodes, with numbers of participants with one or more text units addressed at each node, can be seen in appendix 4p. Appendix 4q presents a NUD•IST tree diagram of the nodal hierarchy.

4.3.2.1 Identifiability

Overall, ten of the participants (23 percent) were coded as saying that they felt less identifiable (6:1; 16:15; 17:6) --- or 'hidden' (5:23; 11:7; 36:8), unrecognisable (7:1; 8:8), more anonymous (29:11), or beyond being attributed responsibility (38:10) --- in the masked condition. (Numbers before the colon are the participant number [unless it has already been stated], numbers after the colon are the text units). Three of these respondents, however, qualified this by saying that they felt only a little bit more anonymous (8:10), slightly more anonymous (29:11), or slightly hidden (11:7) in the masked condition. None of the participants said that they felt more identifiable when wearing the mask.

In terms of the consequences of this reduced identifiability, three of the participants were coded as

saying that they felt it led to a reduced concern with their public self. Participant five, for instance, who felt hidden behind the mask, went on to say that, when she couldn't think of anything else to say to the camera, she suddenly thought: 'They're not seeing me, they're seeing the mask,' (24) so she didn't feel so 'bothered' about not saying anything (24). Similarly, participant seventeen said that she felt less self-conscious when she was wearing the mask because she felt less identifiable. Participant 38 said that she felt that she could 'relinquish responsibility' (9) for what she was saying in the masked condition because there was no way of it being attributed to her.

Feelings of reduced public self-awareness, however, were not the only consequence of anonymity that the participants described.

Participant six said that she felt more inhibited (36) as a consequence of the masked-anonymity. She explained this in terms of the anonymity-to-others making her feel 'less like a person': i.e. that part of her identity --- 'that bit of you which other people see first and quite often recognise you by' --- had been taken away (19). The consequence of this was that she felt less free to talk about herself because there was an incongruence between who she felt like and who she really was:

> It doesn't quite fit, because it's almost as though--- because you've got the mask on you're not really you; you're a stranger, you're somebody else, somebody anonymous, which--- I guess for some people the anonymity might make them feel freer to express themselves rather than less free.
>
> -But for you---
>
> For me, it didn't. (43-45)

Along somewhat similar lines, participant 36 said that being hidden behind the mask felt worse because she prefers actually being, 'honest and really... talking to people face-to-face' (8). When she was wearing the mask, therefore, she described feeling a sense of: 'I shouldn't need to speak through it' (10).

Three of the participants said that feeling anonymous in the masked condition made no difference to how they subsequently behaved or felt.

Along with describing the extent to which they felt anonymous and its consequences, five participants talked about different intervening variables which may have affected their level of felt-anonymity.

Three of the participants said that they did not feel more anonymous in the masked condition because they did not consider themselves identifiable to the Sussex University undergraduates in the first place. Participant 21, for instance, said:

> you say that it's only going to be seen by the... O. U.--- I mean by the students, and there is a degree of anonymity involved in that anyhow. I'm very unlikely to come across any of these... and say, 'Ah look at him, he's the one who...'. So I don't think that the actual mask had any effect in that respect. (18-19)

By way of contrast, participant sixteen said that she did feel more identifiable in the non-masked condition (6), and specifically attributed this to the fact that she didn't live that far away from the Sussex University campus (6):

> -[S]o does 'identifiable' means that you might meet some of the people that you were talking to?
>
> It's possible, yes.
>
> -Right, and they might be able to identify you?
>
> 'So look at that woman there is someone who took part in our survey and she thinks that we're not disadvantaged'. (22-24)

Two other intervening variables related to identifiability were mentioned by the participants. Participant one said that, in the masked condition, she felt particularly anonymous once she had stopped talking: i.e., that when the observers could still hear her voice, she was still identifiable to some extent; but once she was silent, the mask removed any possibility of identification (28). Participant fifteen said that in the second, masked condition, the observers would know that she was the same person because they could recognise her by her clothes --- a comment which suggests that she had not fully understood that the video tapes would be watched by two different groups of students.

4.3.2.2 Public self-awareness

Overall, sixteen of the participants (36 percent) were coded as saying that they felt less concerned with their public self in the masked condition. This includes participants who said that they felt less concerned with how they presented themselves (9:7), less concerned with their facial appearance (2:27; 19:12; 23:14; 25:8; 37:25; 39:14; 42:14), less self-conscious and 'on the spot' (17:6-7), less conscious of 'what the camera might be picking up' (13:6), less concerned with people's reaction to them (1:18; 5:5; 37:27), or less concerned with being attributed responsibility for what they said (38:9).

As stated earlier, however, in only three cases was this reduction in public self-awareness attributed to feelings of anonymity. Four other reasons --- related to more specific aspects of the public self --- were given by the participants for why they felt less concerned with how they presented themselves in the masked condition.

The first of these reasons, given by nine of the participants (20 percent), was to do with the fact that their facial expressions were hidden when wearing the mask. This, in itself, could be broken down into three sub-categories.

The first of these sub-categories was coded as 'non-verbal facial leakage minimised'. Under this sub-category were those participants --- five in total --- who described feeling less concerned with how they presented themselves when their face was masked because they were less worried about 'giving themselves away' through involuntary facial expressions (5:10; 37:16; 42:11). This includes participants who said that they were less worried about 'betraying' their feelings (39:14), letting others see what they were really thinking (2:27), revealing to others when they were being deceitful (42:14), or giving the observers a 'complete picture of what was going on' (39:24).

As a second sub-category of facial expressions, two participants said that they felt less concerned with how they were presenting themselves when their face was covered by a mask because they no longer needed to worry about 'face-work': specifically, smiling (19:11) and grinning (25:8) at the camera. As participant nineteen described: 'I remember it flashed through my mind... "It doesn't matter now, I don't have to smile". Not that I was smiling in the first case, but it still went through my mind, it went through my--- "I don't have to worry about smiling"' (11-12).

As a third sub-category of facial expressions, six participants said that they were less concerned with their public self when masked because they were less worried about their face looking awkward. This included participants who said that they were less worried about looking 'embarrassed' (5:11; 39:27), 'silly' (5:11), 'foolish' (5:12), 'tense' (19:7; 39:27), or 'stupid' (28:9). Participant two said 'there was a security in knowing that if you did start giggling or making funny faces--- Nobody would know' (8-9). Two of the participants said that the wearing of a mask also meant that there was less need to worry about embarrassing physiological facial responses such as blushing (5:14; 19:18) and sweating (19:18).

For three of these participants (1; 5; 39), the particular situation in which the mask most reduced concerns about facial awkwardness was during the silences, both at the end of the statements about students' financial matters/social lives and during the 'who am I?' responses. Participant 39 describes this as follows: 'you can just imagine yourself just getting more and more embarrassed, and sort of uptight, and--- that didn't happen so much [with the mask on] because I didn't feel that they were watching me while I was waiting to think of something else to say' (27).

Two of the participants who spoke of feeling less concerned with appearing facially awkward specifically related this to their own individual characteristics. Participant two said that she was aware of being someone who tended to screw up her face a lot when she talked, and participant five talked about being someone who was very self-conscious.

For two of the participants, a reduction in public self-awareness in the masked condition was related to the occlusion of more permanent facial characteristics: age cues. However, this was in somewhat different ways. For participant thirteen, it was related to facial attractiveness: 'It might be because as I've been getting older, I'm more aware that I'm not very nice to look at visually. So, you know I'd feel... "Somebody's videoing my face and it's not very nice to look at". So as soon as I put the mask on I haven't got to worry about that' (12-14). For participant seven, on the other hand, the greater concern with how he appeared in the non-masked condition was related to a feeling that the students would see him as a 'typical older person telling us what

[to do]' (12), and therefore categorise (28) and immediately reject (6) him.

With respect to feeling less publicly self-aware in the masked condition, three of the participants seemed to attribute this to a sense of feeling more 'detached' (1:6) from the observers. Two participants described this as feeling like there was a 'wall' (23:20; 42:24) between themselves and the people they were talking to. Whilst this was related to the knowledge that the observers could not see their face, the participants, here, did not seem to be talking about feeling less identifiable, per se. Rather, it seemed to be a sense of feeling 'enclosed' (42:28) within the mask and cut off from what was going on (1:19) such that there was less concern or interest with what the observers thought of them. Participant one said that 'it was almost like sitting in another room' (2). She also said that this sense of detachment was particularly prominent when the other means of communicating herself --- her voice --- was no longer present. 'It was almost as if once I'd finished talking I'd switched off and that was the end of it.... It's just that me as me, as far as the cameras were concerned, wasn't here any more, because there wasn't any voice coming out' (7, 28).

For three of the participants, a reduced concern with how they presented themselves was related to the fact that the mask reduced their awareness of being 'watched' (33:16) by the video camera. This was primarily due to the mask's small eye-holes (33:14), or the fact that the mask covered up the eyes.

Finally, one participant explained her reduced concern with what the participants thought of her in terms similar to the 'dramatic license' hypothesis described in 2.1.2. That is, when not wearing the mask, she had a sense of having to present herself to her observers in her normal role. This is as a teacher (31): someone with 'quite high' self-presentational standards. However, once behind the mask, where the audience could not identify her (but more in terms of her role than her specific identity), she felt that she no longer needed to take on that role, and therefore could relax her self-presentational standards.

What were the consequences of this reduction in public self-awareness? For four of the participants, the reduced concern with how they presented themselves seemed to lead to a reduced feeling of inhibitedness: i.e. they felt freer to behave in the way they wanted to. However, this

was not so much expressed as a 'global' feeling of disinhibitedness. Rather, the behaviours that the participants felt more able to enact in the masked condition tended to be closely related to the particular aspect of their public self that they felt less concerned about.

Hence, two of the participants who felt less concerned with 'non-verbal facial leakage' in the masked condition went on to say that they felt more able to behave in ways that they might otherwise inhibit for fear of what others would see in their involuntary facial expressions. For participant 39, this reduced concern with others seeing the 'complete picture' (39:24) meant a greater freedom to self-disclose:

> Um... I noticed myself making more comments about, I think, my own feelings with the mask on, rather than about, sort of, objective comments about who I was. Um... With a mask on... you can just--- you've just got the mask on and you can say something and still feel as though you're not revealing anything. So I was like able to reveal more through what I was saying, because I wasn't really revealing as much through my body language. (12, 16-17)

For participant 42, on the other hand, a reduced concern in the masked condition with 'giving away' the fact that she didn't really believe what she was saying (11) meant that she felt braver to speak sarcastically (7), 'bend the truth' (10), or be 'corny' (36):

> I could have said as one of the ten 'I am' statement 'I love my husband,' but I could say that--- almost as I said it I thought, 'that's quite corny'; but if I'd have said that I'd have caught a--- this was like a [flicks her eyes up] look past my face, I would have regretted saying it [-'yeah'], and so I chose not say it [-'yeah'], rather than look like that, so I didn't say it [-'right']. (36-37)

Similarly, two of the three participants who said that, in the masked condition, they were less concerned with their face looking awkward in the silences, went on to say that, in the masked condition, they felt freer to remain silent. For participant one, this was after talking about the students' social lives/financial matters: 'I think if I hadn't worn a mask for the second one [the masked condition] I might have gabbled on, or rabbitted on a bit longer' (1:4). For participant 39, this was during the 'I am' statements: 'the big

difference was about the fact--- I just noticed in the "I am" statements again was about the time that I could take over them' (39:27).

Similarly, participant seven, who became less concerned with being seen as 'old' and categorised in the masked condition, went on to say that he felt freer to say things when masked (33). This included being more able to relate to the students (6) and understand their difficulties (9), rather than giving them a 'lecture' (4).

Finally, two of the three participants who had said that they felt less publicly self-aware in the masked condition as a consequence of feeling more detached also said that they felt more able to behave in the way that they wanted to. With participant one, this was again specifically related to feeling less self-conscious in the silences: 'with the mask on...I felt as if I wasn't talking I wasn't there, so it didn't matter when I stopped talking because I wasn't there any more' (25). With participant 42, on the other hand, the detachment was disinhibiting more in the sense of feeling like she wasn't really communicating to anybody (42):

> I was able to act like you would on a telephone.... So therefore you're really just talking to a voice on the other end of the phone, and that's how I felt. I felt I could say what I wanted to say, but felt quite safe about saying it. It was just enough of a... a wall, enough of a partition, not to feel that I owed them to acknowledge that they were there. (20, 23-24)

However, both of these participants attributed their feelings of reduced public self-awareness both to a feeling of being detached from the observers, and to the fact that their facial expressions were hidden. Hence, it was not exactly clear to what extent the reduction in inhibitions was due to the former factor and how much due to the latter.

Participants described two other consequences of reduced public self-awareness. Participant 37 said that, in being less bothered about people seeing her in the masked condition, she felt she was 'very much more focused' (21) on the experimental task of verbalising (16). Participant nine, on the other hand, said that a consequence of being less concerned with his public self was that he no longer exercised self-control over his facial twitch, in the way that he would normally do in public circumstances. The

consequence of this was that he actually twitched more, and thereby became more aware of his public self (24).

Five of the participants were coded as saying that they felt more aware of their public selves in the masked condition. Three reasons were given for this.

First, two participants said that they felt more concerned with how they appeared in the masked condition because they were aware of looking 'strange' (22:19), 'unusual' (22:12), or 'weird' (18:5). For participant 22, this was simply a case of feeling more conscious of the way she would look to the group that was seeing her in the mask, because of the unusualness of her appearance (22:12). Participant eighteen's experience was a slight variation on this. It was not so much a concern that those seeing her in a mask would think her weird, but that those seeing her masked might find it somewhat incongruous (8) --- if not 'quite scary' (13) --- watching a 'weird' (5), inanimate 'face' expressing personal, human details.

For two participants, on the other hand, a greater concern with aspects of their public self when masked was related to the fact that, by covering their facial characteristics and facial expressions, the wearing of the mask made them more conscious of what it was that they were verbalising. For participant fourteen, this feeling of greater conspicuousness was related to a sense that the observers would take more notice of what she was saying without 'looking at me to try to take other pointers about what sort of person I might be' (17). Along somewhat similar lines, participant five said that she suddenly started thinking 'do I sound silly?' in the masked condition because there was no facial movements to accompany her communication (37).

Finally, as mentioned above, participant nine said that he felt more aware of his public self when masked because the initial reduction in public self-awareness led to a relaxation of his facial self-control, such that his twitching 'became an issue and it started happening more' (27).

Two participants were coded as specifically stating that the wearing of the mask made no difference to their public self-awareness: 'I can't say that anytime I was too worried about the cameras' (3:9); 'I didn't actually worry what people felt--- thought of me' (12:36).

As with the issue of identifiability, ten participants talked about intervening variables that may have influenced their levels of public self-awareness.

In five cases, this was related to specific individual differences. Two of the participants who had said that they felt less publicly self-conscious when masked talked about this in terms of being people who tended to experience relatively high levels of public self-consciousness in everyday life. Participant two said: 'I don't like being videoed anyway, so that didn't help, some people don't mind--- if it's got to be done it's got to be done, but, um, yes I think I felt much more comfortable with the mask than without' (4). Participant five said: 'I'm quite self-conscious, and at least when I had the mask on--- when I was saying things that I felt were a bit prattish, I didn't mind so much' (5:2).

In contrast, however, three participants seemed to suggest that they did not become any less concerned with their public self in the masked condition because they were the kind of person who was not particularly bothered by how other people saw them. Interestingly, one of these was participant two, who was also coded under 'high PBSC'. She said that, apart from the anxiety over how her facial expressions might be seen, she really didn't care what the students thought of her either masked or unmasked (15). She said that this was because she's 'old enough' (16), and used to being up in front of people and making a fool of herself (22). Similar to this latter statement, participant twelve said that he didn't actually worry what people thought about him because, 'in a sense I'm solid, you know' (36). Participant 21 said that she's the kind of person who's quite happy to stand up and present and doesn't feel the least bit awkward about it (21).

Participant nine specifically related the increase in his facial self-awareness to his twitch (see above).

In terms of situational factors, two of the participants seemed to suggest that they may not have felt particularly concerned with their public selves in either condition because they did not feel that they would be being judged for the specific activity they were engaged in. Participant eight said that she may have experienced more difference if she had known that the people watching her were going to judge her (18). Participant sixteen, on the other hand, said that she was not particularly bothered what the observers thought of her (26) because the subject was not particularly personal (21).

With respect to specific situational factors, as noted earlier, three participants also specifically related their feeling of increased awareness of their public self to a situation in which their face might look awkward: the silences.

Finally, participant eight suggested that she may have experienced a ceiling effect, in that she said that she felt, 'a bit embarrassed anyway, with the mask or without it because the situation is strange' (7).

4.3.2.3 Inhibition

Overall, nine participants (20 percent) were coded as saying that they felt less inhibited when wearing the mask: i.e. they felt more able to behave in ways that they might otherwise restrict. This included those participants who said that, in the masked condition, they felt 'less inhibited' (6:1), 'slightly less inhibited' (38:7), liberated (1:49), or 'freer to say things' (7:33). It also included those participants who said that they felt more able to be self-revealing (15:14; 39:12; 43:5), more able to remain silent when they no longer wished to talk (1:1; 39:27), more able to express emotions (13:41; 39:14), or more able to 'bend the truth' (42:10) when wearing the mask.

As has been seen however, with only four participants was this reduced feeling of inhibition specifically attributed to feeling less concerned with self-presentational standards. Two other reasons were given.

For two participants, the reduction in inhibition in the masked condition was attributed to a sense of 'protection'. Participant 38 said that she felt slightly less inhibited behind the mask because it was like a 'protective shield'; and participant 42 said that she felt 'braver' (33) and 'almost invincible' (28) when 'protected' (33) by the mask. In neither of these cases, however, is it clear whether the participants are talking about a sense of physical protection becoming psychologised (as suggested in section 2.1.8), or a more direct sense of interpersonal protection. If the latter, this sense of protection would more appropriately come under the superordinate category of reduced public self-awareness.

Participant thirteen provided the only other reason for feeling less inhibited when wearing the mask (participants 6, 15, and 14 did not provide an explanation). She said that she felt more able to express

'other aspects' of her 'personality' (26) in the masked condition --- aspects of her personality that she might otherwise suppress or 'control' (40) such as emotions (41) --- because she felt transformed by the mask:

> The very nature of wearing a mask almost gives you another... not another person, but this is now changing you, that you are another person now.
>
> -And therefore in some ways it's easier to express different parts of you that you might not express, because you are someone different.
>
> Yes. (44-46)

In contrast to the nine participants who said they felt less inhibited with the mask on, however, almost 50 percent more participants (thirteen, or 30 percent in total) said that they felt more inhibited when they were wearing the mask. In other words, when wearing the mask, they felt more restricted in being able to behave in the way that they wanted to behave. Participant 40, for instance, said: 'I felt that I could be more free when I was... y'know... without the mask' (10). Similarly, participant 27 said: 'Um... If anything I felt more restricted with the mask on, I didn't feel that the mask made me want to be more open and--- you know--- say things perhaps a bit more enthusiastically than I would normally say them. If anything I found it restricted me slightly' (5-6).

Participants gave five different types of reasons for why they felt more inhibited when wearing a mask.

Most frequently, seven of the participants, or sixteen percent of the sample as a whole, said that they felt more restricted when wearing the mask because it interfered with their ability to communicate through facial expressions. Thus they could not convey the 'whole message' (10:12) or 'the full meaning' (27:8) of what it was they wanted to communicate. As participant eleven explained: 'I felt like I couldn't put over quite so much what I wanted to say because it's not only my voice that says things, I feel I need facial expressions and movements' (10).

Four of these participants related this to their own particular style of communication --- specifically, their tendency to rely heavily on facial expression. Participant four said: 'It's all to do with the eyes--- I'm very much a facial expressions--- I don't talk a lot

which is probably why I found it [communicating with a mask on] quite difficult' (4:14). Similarly, participant 27 said, 'I use my facial expression quite a lot in helping me to express what I'm saying, and I think I'm aware that people can't see that [when I'm masked]; therefore they're probably not going to get... the full meaning' (8).

A second reason that five of the participants gave for why they felt more inhibited in the masked condition was that the mask felt like a 'barrier' between them and their audience. This was not so much that they could not communicate facially, but that it felt like they were talking to 'a wall' (23:20; 40:20) or 'a piece of plastic' (10:7) rather than actually 'delivering anything to anybody' (10:7). Participant 40 describes this experience as follows:

> with the mask I felt as though I was speaking to a wall. You know... so... er... perhaps like a sensation that there's--- the actual communications coming back to you [-'right']. It's not going to an audience, it's... um... it's not actually--- it's sort of ricocheting back to you. (21-22)

A third reason that two participants gave for feeling more inhibited when wearing the mask was to do with a sense of not being themselves: of being transformed. For participant six, as discussed earlier, this feeling of having a different identity --- of being 'a stranger', 'someone anonymous', 'not really you' (43) --- meant that she felt less free to talk about how she really felt. This was because there was a sense of the masked not-self and the self being somewhat incongruent: 'it doesn't quite fit' (42).

As well as this transformation being inhibiting at the level of self-reflection, participant six also talked about this transformation being inhibiting in terms of how others would see her. She said that she was aware that she would appear strange to other people (10). Similarly, participant twelve said that he felt more inhibited about expressing himself when wearing a mask because of the incongruence between who he really was and who he had now become in the eyes of the observers. He said:

> How can I answer 'I' questions when they are actually not looking at my face? It's quite... it got to that point where I thought 'Yeah... this is a bit difficult': the man in the mask, it sort of trying to

> talk to Batman and asking him about his business affairs. (24-25)

Two participants said that they were inhibited from focusing on the experimental task because they were distracted by the knowledge that the mask was on their face.

Finally, one participant described a number of physical reasons why she felt more restricted (3:8) and inhibited (18) in the masked condition. These included the heat and the tendency for the mask to stick to her face (8); a restricted field of vision (12); an inability to move her eyes properly (13); the distraction of seeing the mask when she 'looked up' to think (14-15); and not being able to focus properly on the camera because she didn't have her glasses on (6).

Along with talking about whether they had felt more or less inhibited, nine of the participants talked about the kinds of factors that may have influenced their level of inhibition. In each case, this was related to a sense of not feeling any great desire to inhibit themselves in either masked or non-masked condition (what might be considered a 'floor effect'). Five of the participants said that this was because they did not find the questions they were asked to speak on particularly personal (6:7; 41:21), 'emotive' (13:41), 'contentious' (41:21), or revealing (14:8), but fairly 'neutral topics' (22:5). This was similar to the response given by participant sixteen under 'PBSA/intervening variable/not feeling judged'. However, for these five participants there was no mention of feeling less concerned with what the observers would think of them as a result of the non-personal nature of the questions.

Three of the participants said that there was little scope to feel particularly inhibited in either condition because the subject they were talking about was simply them. Hence, they said that there was little room to change what they were saying: 'I'm only talking about myself anyway' (25:6), 'in either case it was me' (32:3), 'I tried to be as open and honest on both' (21:14).

One participant said that she was the kind of person who did not get inhibited particularly easily: 'If I have to say what I am I say it, with or without a mask' (8:21).

One participant said that he was so focused on trying to sort out what it was that he was saying (41:15) that the issue of feeling inhibited was of little significance.

Finally, increases or reductions in levels of felt-inhibition did not seem notably related to participants' scores on the individual difference measures of desire for individuation and self-esteem (see table 4.5).

TABLE 4.5
Number of participants coded as experiencing an increase or reduction in feelings of inhibition by self-esteem and desire for individuation

	Desire for individuation		Self-esteem	
	high	low	high	low
inhibition/reduced	6	3	5	5
inhibition/increased	6	6	7	4

4.3.2.4 Transformation

Overall, five participants (eleven percent) were coded as saying that they experienced some sense of self-transformation when wearing the mask: i.e. they experienced a change in their subjectively-experienced sense of self. This included those participants who said that, in the masked condition, they felt less themselves: e.g. less like a person (4:25; 6:19), felt that there was no 'me' (10:11), felt that they had lost part of their identity (4:6; 6:19; 12:33), or felt that their personality had changed (12:19; 13:36). It also includes two participants who talked about this transformation more in terms of becoming an-other: i.e. they felt like they had a different identity (6:39), like they were 'a little bit alien' (6:10), like they had become 'a stranger..., somebody else, somebody anonymous' (6:43), or like they were 'someone different' (13:45).

None of these participants gave particularly clear accounts of how they had come to feel transformed when wearing the mask. However, two of the participants did seem to link an 'internal' sense of transformation with a sense of being transformed in the eyes of the observers. Participant four, for instance, said that when she was talking to the camera she could visualise the people seeing her image; and because, when she was wearing a white mask, she had felt like 'there's nothing there',

she had a sense of losing her identity (6). Along somewhat similar lines, participant six said:

> ...you do feel a little bit alien, because you know that you appear strange to other people.... It made you feel less like a person, that you haven't got a face, you haven't got that bit of you which other people see first and quite often recognise you by, so it sort of takes away a bit of your identity, and--- I dunno [...].(10-19)

None of the participants stated that they felt more transformed in the non-masked condition. However, two participants specifically stated in the interviews that they did not feel more transformed when wearing the mask: 'it still felt quite 'me' all the time' (5:5), 'I didn't feel any less myself' (29:16).

Five participants spoke about different intervening variables that may have affected the extent to which they felt transformed by the mask. Three participants were coded as saying that the mask may not have had much effect on them because it was 'plain' (25:12; 44:40), 'white' (25:13; 44:40), and 'deliberately anonymous' (6:13) --- hence, they did not feel that they were 'putting on' (44:42) a particular 'role' (6:13; 25:12) or character (44:35). Along somewhat similar lines, three participants said that they did not feel the mask had much 'influence' (32:4) because they were not asked to play the role of the mask (25:12; 32:4; 44:36). Finally, one participant who said that she did feel transformed by the mask related this to a very acute awareness of wearing the mask, as a consequence of the heat (4:27).

4.3.2.5 Miscellaneous Effects

Along with the main psychological effects of interest, 27 participants (61 percent) were coded as talking about other differences between the masked and non-masked conditions. Nodes and response-frequencies can be seen in appendix 4p.

As this table shows, just one participant talked about the mask facilitating the expression of aspects of the self: 'putting the mask on, it almost felt like there were other aspects of my personality wanting to come out' (13: 26). However, as this participant seemed to account for this process in terms of feeling that 'you are someone different' (45), it may be that this text unit should come under 'transformation' rather than 'expressing aspects of the self' (see section 2.3).

This table also shows that 24 participants talked about various psycho-somatic changes that the wearing of a mask brought about. These seemed to be mainly 'negative' experiences, such as: 'claustrophobic', 'smells plastic', 'stuffy', and 'uncomfortable'. As discussed in section 4.2.5.2, these experiences were initially coded under 'inhibition/increased', but were moved because it was felt that there was no direct evidence in these text units that participants were feeling unable to behave in the way that they wanted to behave. However, these psycho-somatic effects of wearing a mask do hint at the possibility that the participants were feeling more restricted or constricted when wearing the mask.

4.3.2.6 Not much difference

Fourteen participants (32 percent) were coded as saying that they did not experience much difference between the masked and non-masked conditions. This includes participants who, when asked if they experienced any differences between these two conditions, said that they did not feel much of a difference (3:1; 15:11; 20:4; 22:9; 32:6; 41:3; 43:6), did not feel a 'particular difference' (8:6), or felt 'it was the same' (25:4).

4.3.2.7 Experimental design

Nineteen participants overall (43 percent) were coded as talking about specific aspects of the experimental design --- including (and primarily) those participants who talked about the design without specific reference to the main dependent variables. Two participants said that they found it easier to talk about the financial matters than the student's social lives. Twelve participants talked about order effects, eleven saying that they found it easier or less anxiety-provoking when it was the second time round, and one (13) wondering whether she should be changing her 'I am' statements in the second trial because she had already said them once. One participant (3) said that she thought it was a shame that the mask was so firm and plastic rather than rubbery (24), but did not elaborate on this. One participant (4) talked about the experimental situation being 'so unreal' (31) and 'weird' (34), particularly with the knowledge that someone would be watching it (32). Finally, seven participants talked about various distractors that had made it difficult for them to focus on the experimental tasks as a whole (see appendix 4p).

4.3.2.8 Expectations

The final superordinate category into which different responses were coded was that of 'expectations'. This includes both participants responses to the question:

'What did you think the aims of the study might be?' and also participants' prior expectations as to the psychological effects of wearing a mask.

Twenty-eight, or 64 percent of the sample as a whole, expected the study to be looking at whether masks brought about an increase in feelings of anonymity. Participant nineteen, for instance, said, 'I expect the aims were something to do with being able to feel anonymous behind some sort of barrier, in this case a mask' (1).

Of these participants, twenty-four (or 55 percent of the sample as a whole) went on to say that they thought the study might be looking at whether being anonymous behind a mask would lead to an increase in disinhibited behaviour, as a consequence of being unrecognisable by others. Many participants were quite articulate about this predicted link between anonymity, reduced concern with evaluation by others, and a reduction in inhibitions, for example:

> I think one can feel much more anonymous and can do things [when wearing a mask] that you would not normally do because of probably shame or something that can... person can't judge you, because they can't see your face and recognise you. (8:4)

> If you're not identifiable then there's freedom to--- you can make any statements you wish because it's not going to come back to you. If you're recognisable then you have a certain responsibility for what you say, and how people--- the consequences of what you say. (28:3-4)

Overall, twenty-four participants were coded as saying that they thought the study was interested in looking at whether wearing a mask reduced one's 'public self-awareness': e.g. one's self-consciousness (17:1), or 'what other people might think' (13:1). As has been seen, in all of these cases this was attributed to a reduction in identifiability, and in all of these cases the result was seen as an increase in disinhibited behaviour. However, whilst all participants who talked about an expectation that the anonymity of the mask would bring about a reduction in inhibition were coded under this category of reduced self-awareness, this intermediate variable was generally not as explicit as either 'anonymity' or 'disinhibition'. Indeed, in roughly half of these twenty-four cases, it seemed that the participants were making a direct link between anonymity

and disinhibition without specific reference to a reduction in public self-awareness, e.g.:

> Well I would imagine that you're--- with a mask on one might feel more anonymous and therefore wouldn't have as many reservations about the way they behave. (30:1)

> Possibly you might feel able to say things behind the mask that you wouldn't have said: maybe be more honest. Because you couldn't be identified. (35:3-4)

Along with the 24 participants who thought that the wearing of a mask would reduce inhibitions as a consequence of reduced identifiability, two participants thought that the wearing of a mask might reduce inhibitions because an individual's facial expressions would be hidden. Two participants also said that they thought that they would feel more inhibited behind the mask.

Six participants thought the study might be about --- or expected the wearing of masks to bring about --- some kind of change in roles.

Other expectations as to the aims of the study or the predicted effects of wearing a mask can be seen in appendix 4p.

4.4 DISCUSSION

4.4.1 Hypothesis one: The wearing of a mask, under conditions in which an individual's identifiability is dependent on 'immediate' facial recognition, will lead to a reduction in feelings of identifiability

Both the quantitative and qualitative data strongly support this hypothesis. This does not seem to be a consequence of demand characteristics, as 'aware' participants showed a substantially smaller reduction in feelings of identifiability than non-aware participants. Experimenter-expectancy effects may have played some part in producing these results. However, given that, at a descriptive level, the mean scores in the masked conditions are very different from the mean scores in the non-masked conditions, and that these differences are triangulated with the qualitative data, it seems very unlikely that the entire difference between the two conditions can be attributed to experimenter-expectancy effects alone.

It is significant to note, however, that the correlation between the measures of anonymity and measures of identifiability was just -.47. This suggests that one should be cautious in using the term 'anonymity' to refer to the opposite of 'identifiability', as, to some extent, these two terms do not seem to be uni-dimensional. From the qualitative interviews, there was a sense in which this may have arisen because participants sometimes used 'anonymous' to refer to 'un-identifiable', and sometimes to refer to something more akin to 'identity-less'. These are quite different meanings. For instance, one could feel like a very identity-less, face-less human being --- a 'no-one' in a crowd --- whilst still having a sense that people could know who you were and recognise you. In this respect, anonymity has an element of 'transformation' to it, and, as such, should probably not be used as an item to counterbalance measures of identifiability. Instead, measures of 'non-identifiability' or 'unidentifiability' would probably provide a more veridical counterbalance.

From the qualitative data, it would seem that many participants did not experience a notable reduction in feelings of identifiability when wearing the mask. It should be borne in mind, however, that there was some initial concerns that the mask might not bring about any reduction in feelings of identifiability at all, as the Open University students might feel totally un-identifiable to their observers in the first place. This did not happen; and, indeed, the mean of 7.3 on the combined identifiability score in the non-masked condition suggests that participants did feel relatively identifiable. This suggests three things.

First, that in a context where individuals could actually be recognised the reduction in feelings of identifiability that a mask might bring about would probably be greater than in the present study. Such a prediction is supported by the fact that three participants were coded as saying that they did not feel any less identifiable in the masked condition because they did not identifiable in the first place. It is also somewhat supported by the fact that the one participant who could have been recognised because she lived close to the campus experienced a more marked reduction in feelings of identifiability when masked.

Second, the fact that participants did experience a felt-reduction in identifiability even though most of them were 'objectively' unidentifiable in either condition

highlights the importance of distinguishing between actual-identifiability and felt-identifiability.

Third, the fact that participants felt identifiable in the non-masked condition suggests that the present experimental paradigm may be a useful and economic means of invoking feelings of identifiability for subsequent research.

As predicted, the qualitative data also shows that immediate facial identifiability is not the only factor in determining how identifiable an individual feels. From the qualitative data, it would seem that voice and clothes were also identified by participants as possible means of recognition.

4.4.2 Hypothesis two: The wearing of a mask, under conditions in which it reduces an individual's identifiability, and under conditions in which positive external events are not forthcoming, will contribute to a reduction in feelings of public self-awareness

The qualitative and quantitative data in this study also strongly support this hypothesis. Again, this does not seem to be a consequence of demand characteristics, as 'aware' participants showed a smaller reduction in public self awareness than 'non-aware' participants. Again, there is the possibility that it is due to experimenter-expectancy effects, but the triangulation between the qualitative and quantitative data suggest that this is unlikely to be the primary cause of this effect. Furthermore, given that the concept of 'public self-awareness' is somewhat more complex than that of 'identifiability' or 'inhibition', it seems less likely that 'unconscious' messages could have been transmitted to the participants, encouraging them to respond in a hypothesis-confirming way.

The ecological validity of this finding is strengthened by the fact that the experimental conditions are likely to have maximised the possibility that participants would actually feel more publicly self-aware when wearing a mask rather than less. Participants were tested alone: a context in which, as Diener (1980), Zimbardo (1969) and others have argued, manipulations of anonymity may heighten public self-awareness rather than reduce it. Participants were also wearing masks in an academic, classroom environment: one in which the wearing of masks would not be considered a particular normal or everyday activity. Nevertheless, only five of the participants indicated that they felt more aware of their public

selves when wearing a mask, and only two of these actually said that they thought that they looked 'strange' or 'weird' in the masked condition. Furthermore, contrary to predictions, participants did not feel significantly more conspicuous in the masked conditions.

What was much less expected, however, was the type of reduction in public self-awareness that the participants seemed to experience. From the discussion in section 3.2.2, there was an expectation that participants would experience something of a global reduction in public self-awareness. In fact, from the qualitative data, it would seem that this reduction in public self-awareness tended to be much more specific: e.g. 'I felt less concerned with grimacing,' or 'I felt less concerned with "giving myself away" through my eye movements'.

This finding has substantial implications for the question of why it is that masked individuals might experience a reduced concern with their public self. In section 3.2.2, two possible pathways were identified: a motivational pathway and an attentional pathway. Given that there was a significant positive correlation of .30 between feelings of identifiability and feelings of public self-awareness, it seems possible that these identifiability-mediated pathways may have partly contributed to reduced feelings of public self-awareness. However, with respect to the motivational pathway, only a small proportion of the participants seemed to feel less publicly self-aware in the masked condition because the reduced identifiability made them less concerned with being retaliated against or censured by their observers. Furthermore, none of the participants talked of a <u>global</u> reduction in public self-awareness as a consequence of the masked-anonymity drawing their attention away from how they appeared to others.

Instead, what the qualitative data seems to suggest is that the wearing of a mask primarily reduced the wearer's concerns with 'mask-able' facets of their public self. That is, when a number of the participants knew that their faces were being watched in the non-masked condition, they became concerned with how they were appearing to the observers: for instance, a concern with looking awkward, or a concern with being seen as unattractive. Thus, when these facets of the public self were covered with a mask, these concerns were reduced. But this reduction in public self-concerns did not seem particularly related to a reduced concern with being identified. For instance, when participant 42 likens the

experience of wearing of a mask to feeling braver when talking to someone on the telephone, there is no suggestion here that this comes about because the other person is less likely to know her identity. Clearly, the other person at the end of the telephone will know exactly who she is. Rather, the reduced public self concern comes about because that other person is less able to see her facial expressions.

To some extent, then, these findings do support the prediction by Buss (1980) and Carver and Scheier (1981) that anonymity-invoking conditions --- such as the wearing of a mask --- will reduce an individual's public self-concerns. However, contrary to Prentice-Dunn and Rogers (1989), the findings from this study suggest that this is not so much because the individual is less concerned with being identified, but because, under conditions of anonymity, an individual is less likely to feel that their public selves are under scrutiny by others. Hence, they are less likely to turn their attention towards their public self themselves. Furthermore, whilst Wicklund and Gollwitzer (1987) criticise Carver and Scheier for attempting to break the self down into increasingly fragmented parts, the findings from the present study suggest that it is important to specify exactly what parts of the public self --- let alone the self --- are being talked about. Whilst the findings from this study show that the wearing of a mask reduced concerns with mask-able facets of the public self, there is no evidence to suggest that it concomitantly reduced more global public self concerns, such as being seen as intelligent or friendly.

Hence, whilst anonymous conditions may take an individual's attention off facets of their public self, exactly which facets they reduce a concern over may be dependent on exactly which public self facets can still be 'seen' by others. For instance, an anonymous individual sending mail over the internet may experience little concern with how they dress because no-one is looking at this facet of their public self. But they may still be concerned with the quality of their prose because they are aware that this public self facet will be scrutinised by others.

With respect to specific factors, it is also significant to note that individuals' concerns with how they presented themselves at a global level (PBSC) did not correlate with their reduction in public self-awareness when wearing a mask. Rather, as the qualitative data suggests, it seemed only to be those individuals with

very specific concerns about mask-able public self facets (such as blushing or looking awkward) that experienced a reduction in public self-awareness when wearing a mask. In this respect, it would be very interesting to develop a more specific 'facial self-consciousness' scale, and to see if this relates to reductions in public self-awareness as a consequence of wearing a mask. Items on such a scale could include statements such as: 'I worry about people seeing me blush', or 'I'm concerned about "giving myself away" through non-verbal facial expressions'.

The findings from this study, however, do not in any way negate the possibility that a reduction in identifiability may reduce public self-awareness at a more global level, as a consequence of a reduced concern with censure or punishment. One notable example where this did happen was with the participant who lived close to Sussex University, and thereby was genuinely concerned that others might recognise her and criticise her for what she said. This shows that reduced identifiability clearly can reduce public self-concerns. However, this occurred in a context in which the individual was not just identifiable, but also concerned about the consequences of this identifiability. This suggests that, for a reduction in identifiability to reduce feelings of public self concern, the individual must actually be concerned about what might happen if they are identified.

This may explain why feelings of reduced identifiability, in the present study, did not seem to be one of the main reasons why participants felt less concerned with how they presented themselves. Although many of the participants felt less identifiable in the masked condition, it seems likely that they may also have felt far beyond the reach of any 'retaliations' that the Sussex students might have had in store for them. Hence, the fact that they were less identifiable did not make them less concerned about how they presented themselves, as they may not have been particularly concerned with their public self-presentation in the first place.

As a general summary, then, one might state the following. If an individual is concerned with a particular mask-able facet of their public self --- either for situational or individual reasons --- then the wearing of a mask has the potential to reduce this public self concern. Where the facet of the public self that the individual is concerned with is their facial identity, then the wearing of a mask may bring about a more global reduction in public self concerns.

It should be noted, however, that there are two further reasons for a reduction in public self-awareness as a consequence of wearing a mask that do not fit easily into this hypothesis. The first of these was that the mask brings about a sense of interpersonal detachment, such that the individual feels separated off from their observers. Thus, there is a feeling that they are almost alone. The other reason was that participants can actually see the camera --- or whatever else is watching them --- less easily, and therefore they feel less aware of being watched. With both these factors, it might be interesting to look at whether changing the type of mask worn can further decrease feelings of public self-awareness. For instance, it might be that a very thick mask could increase a sense of being 'walled off' from others, or that a mask with only pin-holes for eyes could further decrease the sense of being watched.

In terms of situational generalisability, the findings from this study raise some important questions about when and where a mask is likely to reduce feelings of public self-awareness. Whilst masked-anonymity may reduce public self-awareness as a consequence of reduced concern with punishment, for such a situation to occur, two things would seem to need to happen. First, the individual must actually feel that she can be identified; and, second, she must feel that there is the possibility of 'retaliation' as a direct consequence of this identification. Given these necessary pre-conditions, it seems likely that, in many situations, a masked reduction in identifiability will not contribute much to a reduction in public self-awareness. For instance, in a carnival situation, an individual may well feel that no-one can see her in the crowd anyway; and, even if she feels that they can, she may feel that there is no way that they can 'reach' her to punish her for her behaviour. It may well be, then, that reductions in identifiability will only really contribute to reductions in public self-awareness in very specific situations. For instance, a political protester on a demonstration might feel that she is identifiable to the police, and that, if they do identify her, she might face imprisonment. Under these conditions, it would be predicted that the wearing of a mask could substantially reduce her concerns about how she behaves.

On the other hand, based on this research, there may be a number of situations, not specifically related to identifiability, in which an individual may have very specific concerns about how her face appears. For

instance, a public speaker may worry about looking nervous, a psychotherapeutic client may be very anxious other group members 'reading' her facial expressions, or an adolescent may feel that no-one wants to know him because of his oily or spotty face. Under these conditions, it would be predicted that the mask would bring about a substantial reduction in public self-awareness. Clearly, these are not everyday situations in which individuals wear masks. Given, however, that one of the aims of this study is to understand how the mask might be used in a therapeutic environment, the fact that the wearing of a mask might have an effect in these kinds of situations may be of substantial importance.

In developing this research, therefore, it could be very productive to investigate the kinds of situations in which individuals might be concerned about mask-able aspects of their public self. One way to do this would be to carry out a questionnaire study in which respondents were asked: 'In what situations are you concerned with how your face appears?' Based on the responses to this questionnaire, one could then test whether the mask brought about a greater reduction in public self-awareness in 'high facial concern' contexts (e.g. public speaking), as opposed to 'low facial concern' contexts (e.g. working at a computer).

4.4.3 Hypothesis three: The wearing of a mask, under conditions in which it reduces an individual's public self-awareness, and under conditions in which an individual wishes to behave in ways that are contrary to their public self-standard, will have a disinhibiting effect

In contrast to the two previous hypotheses, the findings from this study do not provide strong support for this hypothesis. To some extent, the non-significance of the quantitative results might be attributed to a number of methodological problems. For instance, the poor reliability of the coding; or the presence of self-presentational concerns, such that the participants did not want to be seen as antipathetic to the students (by the experimenter) in either condition. However, the findings from the qualitative interviews strongly triangulate with the quantitative findings, and suggest that, overall, the participants in this study did not experience a general disinhibition of feeling or behaviour.

This, then, leaves two possibilities. Either hypothesis three is incorrect, or else the quantitative measures

failed to adequately test it. From the qualitative data, the latter explanation seems more likely. Hypothesis three states that for a disinhibition of behaviour to occur, the mask-wearer must want to behave in a way that is discrepant from their public self-standard. However, from the qualitative data, there is no evidence that participants did want to behave in the predicted public self-standard-discrepant ways: i.e. expressing antipathy to the Sussex University students or disclosing intimate details to them. Hence, the finding that participants in the masked condition did not behave more antipathetically or more intimately does not necessarily contradict hypothesis three. Furthermore, where participants did seem to want to behave in ways that were discrepant with their public self standard --- for instance, talk sarcastically or remain silent --- then the wearing of a mask did seem to have a disinhibiting effect.

This would seem to reinforce the point made in section 3.2.2.3.2 that, for a mask to disinhibit its wearer, the wearer must want to behave in a way that is discrepant from her public self-standard. Moreover, given that the wearing of a mask seems to reduce particular, rather than global, public self-concerns, it would follow that the wearing of a mask is only likely to disinhibit those particular behaviours which are discrepant with the <u>particular</u> public self-standard over which the mask-wearer has reduced concern. Such a prediction is verified by the qualitative data. Participant 42, for instance, felt less concerned about being seen to lie when wearing a mask. Therefore, she felt more able to 'bend the truth' when she was speaking. But there is no evidence that she also felt more able to behave in an aggressive manner or disclose more personal information about herself.

Given that, in most cases, the mask brought about a reduction in public self-concern because it hid the wearer's facial expressions, it would seem that MacGowan and Rosse's (1924) account of masked-disinhibition (see section 2.1.6) actually comes closest to explaining why some participants in the present study felt less inhibited when wearing a mask. However, this does not discount the possibility that masked-anonymity will lead to a more global disinhibition of behaviour if an individual feels that she is less likely to be punished for her behaviour. If, for instance, an individual is concerned with being facially identified, and wants to behave in a way that she would normally inhibit for fear of being identified, then the wearing of a mask may disinhibit this action.

With respect to disinhibition, perhaps one of the most unexpected findings of this study was that around a third of the participants actually felt more inhibited when wearing a mask. The internal validity of this finding is all the more robust given that this outcome was not expected, and therefore can not be attributed to experimenter-expectancy effects. Moreover, in terms of demand characteristics, it should be noted that nine out of the thirteen participants who were coded as saying they felt more inhibited when wearing a mask had, themselves, expected to feel less inhibited in the masked condition.

This finding, although unexpected, supports the critique of differential self-awareness theory made in 3.2.2.3.2, that not every human 'instinct' is in a direction counter to the public self ideal. In fact, in the present study, the participants' 'instincts' frequently seemed to be towards highly pro-social behaviour. For instance, several of the participants wanted to make close 'contact' with their observers, or to communicate clearly what it was that they were trying to say. From reading the transcripts of the participants' prose, there was also a sense that many of the participants wanted to give 'useful' advice to the Sussex undergraduates on how to make the most of their college years. In not all of these cases was the mask experienced as inhibiting. However, where participants wanted to act in ways for which their faces needed to be seen --- for instance, conveying the non-verbal elements of the 'whole message' --- then the mask was experienced as an inhibitor.

What these results strongly suggest, then, is that the wearing of a mask can be experienced as both inhibiting and disinhibiting, depending on what it is that the wearer wants to do. If an individual has a desire to behave in a particular way, but inhibits that behaviour out of a concern for mask-able facets of their public self, then the wearing of a mask, under conditions in which it reduces those concerns, can be predicted to have a disinhibiting effect. However, if an individual wishes to behave in a way for which they 'require' mask-able facets of their public self, then the wearing of a mask can be predicted to have an inhibiting effect.

It should also be noted that the same person may experience the wearing of a mask as both inhibiting and disinhibiting, depending on what it is that they want to do. In fact, two participants in this study had text units coded under both 'inhibition/reduced' and 'inhibition/increased'. This is somewhat similar to the

findings of Pollackzek and Homefield (1954), that although their clients initially found the masks liberating, once they had got used to them and wanted to develop their characters, they were experienced as stultifying and inhibiting.

In terms of situational generalisability, the discussion here suggests that the disinhibiting effects of wearing a mask may be very specific. Not only does the mask-wearer need to be less concerned with a particular facet of their public self, but they also need to want to behave in a way that they would normally inhibit out of a concern for that particular facet of the public self. Given the specificity of these parameters, it seems unlikely that the wearing of a mask, particularly as a spontaneous or un-planned act, will bring about much of a reduction in inhibitions. However, it should be borne in mind that, in most cases, the wearing of a mask is not something that an individual does spontaneously, but deliberately, with reference to a particular time and situation. Hence, along the lines suggested by Ottenberg (1975), it may be that when an individual actively wants to behave in a way that they would normally inhibit out of a concern for a particular facet of their public self, then the wearing of a mask may be something that they turn towards.

Paradoxically, however, the reverse might be true in terms of the mask's inhibiting effect. At a level of conscious deliberation, it seems unlikely that many people would choose to wear a mask to inhibit themselves. However, given that individuals frequently use mask-able aspects of their public self in everyday activities, if a mask were worn spontaneously or in an un-planned way, then there is a good chance that it would be experienced as inhibiting. This means, then, that the effects of wearing a mask may be very much related to whether this is something chosen or imposed; and given that in the present study it was primarily imposed, one might expect the wearing of a mask in the 'real world' to have a more disinhibiting, and less inhibiting, effect, than in the present study.

To investigate this further, however, one would need to identify the kinds of situations in which participants wanted to do things but inhibited them out of concerns for their mask-able public self, and situations in which participants wanted to do things which required the use of their mask-able public self. Again, this could be done through a very straightforward questionnaire, asking questions like: 'Describe something you would really like

to do but would/would not want your face to be seen while doing it'. Those situations in which there was a general desire to be seen, and those in which there was a general desire not to be seen, could then be used as the basis for an experimental study: either field- or laboratory-based. The prediction here would be that participants would feel less inhibited in the masked condition of the 'low desire to be seen' situation, but more inhibited in the masked condition of the 'high desire to be seen' situation. Given the low reliability of observer ratings on disinhibition in the present study, it might also be a very good idea in such a study to ask participants to rate their own levels of inhibition or disinhibition.

Alternatively, a less intrusive study could be conducted along the lines of Mathes and Guest (1976). Participants could simply be presented with a list of 'high desire to be seen' and 'low desire to be seen' situations, and then asked to rate how willing they would be to undertake each of the behaviours in masked and non-masked conditions. Again, the prediction would be that participants would be more willing to undertake the 'low desire to be seen' behaviours when wearing a mask, but less willing to undertake the 'high desire to be seen' behaviours.

4.4.4 Other Findings

Along with the three main hypotheses, there were also a number of subsidiary questions that this study was interested in exploring, some of which have already been addressed (e.g. PBSC).

One of the questions raised was whether masked-anonymity would lead to a greater desire for individuation. From the self-report measures, there is no evidence that this was the case, and there was no significant negative correlation between desire for individuation and feelings of identifiability. Also, individuals with a higher desire for individuation did not feel any more inhibited when wearing the mask. However, this study did not provide a fair test of the individuation hypothesis because, as Maslach (1974) argues, this desire is only likely to be present if an individual expects positive forthcoming events, and the study was specifically designed to minimise this possibility. Furthermore, from the qualitative data, two of the participants did seem to feel undesirably de-individuated when anonymous behind the mask. From the qualitative data, there is no evidence that they did try and re-individuate themselves, but this may have been the case if they had been expecting something positive to be forthcoming.

This study also did not in any way provide an adequate test of the hypothesis that the wearing of a mask increases an individual's sense of social identity. The participants were masked, alone, and hence from a Reichian position there was no reason for any of them to feel any less aware of their personal, individual identity when wearing the mask. The finding that they did, then, was somewhat unexpected, as was the fact that scores on measures of 'awareness of personal and individual identity' correlated extremely highly with scores on measures of identifiability (Pearson correlation = 0.58, $p < .000001$). This finding, then, is probably more related to the question of whether an individual feels transformed when wearing a mask; and, along with the fact that eleven percent of the participants were coded under transformation/not-self, provides some firm grounds from which to go on to explore the hypothesis that the mask transforms its wearer.

As predicted by differential self-awareness theory, the wearing of a mask did not bring about a significant reduction in levels of private self-awareness or a significant increase in levels of 'altered experience'. It is somewhat worrying, however, to note the very low inter-item reliability on the former measure. Interestingly, Prentice-Dunn and Rogers (1982) do not report the inter-item reliability that they found for these two measures, and it may be that better measures will need to be developed to assess this dimension more reliably.

As a final pre-experimental prediction, there was very little evidence to show that individuals high in self-esteem felt more inhibited when wearing a mask, or found the wearing of a mask less pleasurable. Again, this may be because the mask disinhibits and inhibits in very specific ways, and more global measures are less able to pick up on the specific areas of the public self over which an individual may have high self-esteem.

Finally, with respect to the psychological effects of wearing a mask, it was interesting to note how similar many of the 'lay-hypotheses' were to the kind of hypotheses found in the psychological literature. For the majority of the participants, there was an assumption that a mask would disinhibit its wearer, and that this disinhibition would come about as a consequence of reduced identifiability. Again, this raises the question of social representations (Moscovici, 1984) of the mask's psychological effect.

4.4.5 General Methodological Issues

What is the general reliability of these findings? With respect to synchronic reliability, there would seem to be a high degree of agreement between the qualitative and quantitative data. The only area in which synchronic reliability was weak was with respect to the coding of disinhibited behaviours. Here, it may make sense in future to use self-report measures or strictly behavioural measures, as raters would seem to vary quite markedly in what they consider disinhibited. With respect to diachronic reliability, there is also less certainty, and further studies --- with the kinds of developments discussed --- would be a useful means of testing the reliability of these findings across time.

With respect to the internal validity of the study, Reason (1994) suggests that this is dependent on the quality of awareness of the participants; and, in this respect, the respondents in this study seemed very able to articulate and communicate their experiences of wearing a mask. However, because the frequencies of coding reflected only how many participants said 'what' rather than how much of 'what' they had said, the analysis may have failed to pick up on the intensity of different feelings. Also, in using the NUD•IST program, a very hierarchical structure was imposed on the qualitative data, which sometimes felt limiting and not entirely true to the data itself. A less rigid structure, such as the causal network used in appendix 2a, may have represented the data in a more veridical way.

With respect to internal validity, perhaps the greatest possible source of error was the presence of the experimenter and the possible confounding effects of experimenter expectancy: both during the experiment and during the post-experimental interview. Some of the findings, however, can not be explained in this way --- for instance, that some participants felt more inhibited when wearing a mask --- as the experimenter was genuinely not expecting these responses. Nevertheless, in future studies, it would seem ideal to try and take the researcher out of the experimental environment as much as is possible.

One way to achieve this might be to have the participant facing away from the researcher instead of towards him. It should also be possible to reduce the contact between researcher and participants by automating the experimental tasks as far as possible. This would not require the experimenter to be outside the room, and

would ensure that the possibility of interference was kept to a minimum.

With respect to the post-experimental interviews, there would also be an argument for having this conducted by someone other than the researcher. This could minimise the possible confounding effects of 'leading questions', and reduce the 'obligation' that participants might feel to give the researcher the answers he wanted. At the same time, as Kvale (1996) argues, there is substantial value in an interviewer being informed about her subject, and having an awareness of the kinds of questions that are being asked. The solution, therefore, might be an informed interviewer other than the researcher, himself. However, to find such a person --- and to ask them to conduct interviews every twenty minutes or so --- would require substantial financial and time resources.

A similar issue emerges in terms of the internal validity of the coding process. By coding the interview himself, there is the danger that the researcher will introduce a substantial degree of bias into the structuring and categorising of the data. Ideally, this would be done by colleagues who were informed but not 'committed' to achieving particular outcomes. Again, however, there is the practical problem of finding someone who knows this theoretical area well, and is prepared to spend at least a week coding and categorising the data. The compromise used in this research was to have a colleague check through the analysis and to question any inconsistencies. If, however, it were possible to reduce the complexities of the unit of analysis --- e.g. by using words or short phrases rather than whole sentences --- then the length of time required for the coding processes could be considerably reduced.

If, then, it is the researcher who carries out the interview and analysis --- as in the present study --- what would seem important is that there is a degree of 'reflexive validity' (Kvale, 1996). This means that the researcher can be open about his own aims and biases and consider how this may have influenced the findings.

How did I experience the interviewing process? On the whole, I think that I was relatively able to bracket the main hypotheses and be open to the participants' actual lived-experiences. Evidence for this mainly comes from the fact that so many findings emerged that fundamentally contradicted what had been expected.

Where the biases may have occurred, however, is in encouraging participants to talk about experiences that were only at the fringes of reflective awareness. During the interviews, I feel that perhaps I adopted a somewhat 'dogged' stance, encouraging participants to get at the essence of their phenomenological experiencing. The consequence of this may have been that participants described experiences or drew connections as a means of 'obliging' me, rather than because these were experiences that they had a clear sense of.

Similar issues arose in the coding. On reflection, I do not think that my main aim here was to put as many text units as possible into the 'reduced identifiability' or 'reduced inhibition' categories. What I think I may have done, however, is to create new categories and highlight differences where, perhaps, it was not particularly clear that differences did exist. During the coding process I certainly experienced a need to be able to create some kind of coherent structure out of the mass of data. In this respect, it may have been that I 'lumped together' certain text units that, in reality, were actually saying somewhat different things. Miles and Huberman (1994) call this desire to be making too much sense of data the 'holistic fallacy'.

With respect to population validity, it is clear that the findings from this study can only be generalised out to a wider population with the utmost caution. Participants in this study tended to be relatively well-educated, the majority came from lower middle class backgrounds, and they were mainly women. Furthermore, because a self-selection sampling procedure was used in this study, the participants who took part were likely to be more intellectual, more sociable, less conventional, less authoritarian, and have a greater need for social approval than the general population as a whole (Rosenthal, 1970). It is uncertain, however, how any of these factors might interact with the treatment effect -- if at all.

What might have been more likely to interact with the treatment effect is the fact that participants who volunteered for this study probably did so on the basis that they were interested in masks and their psychological effects. Participants who had no interest in masks, on the other hand, may have been unlikely to volunteer. The former participants may have been more open to the possibility that the mask had some kind of psychological effect, and less cynical about what actually happened when they wore a mask. This may not

have predisposed the results towards one or other hypothesis, but it does seem likely that the effects of wearing a mask on the population as a whole would be somewhat less than what was reported in this study.

There is also a very important question about ecological validity. Clearly, the situation in the laboratory was a very specific one. However, as Miles and Huberman (1994) write, there is something 'undeniable' about the qualitative data, giving it a sense of being able to travel outside of the immediate experimental environment. This seems to be particularly the case when participants talked about particular mechanisms by which the mask came to have an effect. Where participants, for instance, said that they felt more inhibited when wearing a mask because they could not use their face to communicate, it would be difficult to see how this might not also occur in non-laboratory settings.

At the same time, the kinds of effects and concerns that emerged in the study are probably very much related to the kind of experimental set-up. Issues around communication may have taken on substantial importance because participants were talking directly to a video camera. Had the participants been in a different situation --- such as in a group where there was no particular need to communicate --- then the kinds of issues that participants experienced may have been very different.

There is also the question of the specific type of mask used in this study, and whether the results with this mask would generalise to the experience of wearing other masks. Given that only one mask was used, this is impossible to say, and it would be important in subsequent studies to use more than one mask to get some assessment of how the 'facial appearance' of the mask affects its wearer. However, where participants did describe the mask, they talked about it as being a somewhat blank face, and it is not easy to see how this, in itself, would have cued participants to feel less identifiable or less aware of their public selves. Also, when participants talked about feeling more or less inhibited when wearing the mask, this did not seem at all related to the mask's appearance. The two findings that may have been somewhat related to the mask's appearance, though, were the findings that participants felt more anonymous and also that some participants felt more identity-less when wearing the mask. Given that it is not possible to have a 'face'-less mask, the possible biasing effect of a mask's appearance would appear unavoidable.

However, in future studies, if more than one mask was used, then it would be possible to assess how much an individual's responses are determined by a mask's particular appearance.

As a final methodological point, it seems that the combined use of qualitative and quantitative data has worked very well in this study. The quantitative data has been able to provide a clear sense of how individuals responded to the wearing of a mask at a general level and has been able to collect data on some predefined areas of interest. The qualitative data, on the other hand, has been able to identify the processes by which these changes occur. Both have provided important sources of clarification and triangulation for the other. Without the qualitative data, for instance, the possibility that the mask reduced feelings of public self-awareness for reasons other than reduced identifiability may never have emerged. Equally, without the quantitative data, it would not have emerged that participants felt significantly less aware of their personal and individual identity when wearing the mask.

Just over twenty percent of the participants said that they felt uncomfortable wearing a mask. This raises some ethical cause for concern. However, overall, participants rated the masked condition as only slightly less pleasurable than the non-masked condition, and both seemed at relatively acceptable levels --- close to the midpoint of the scale. Nevertheless, what this highlights is the importance in future studies of emphasising to participants that they can terminate their participation in the study if they wish to.

This relates to another ethical issues which subsequent studies need to deal with on a more formal basis: that of informed consent. In the present study, the process was relatively informal, but in future, it would be preferable to give participants something actually written down, which they can then sign if they are agreeable to. As Christensen (1997) states, this should particularly state that participants are under no obligation to continue with the study if they do not wish to.

Finally, the debriefing process in the present study addressed any misconceptions that participants might have had about the experiment, but it did not specifically explain to them exactly what the study was about. In terms of catalytic validity, then, in future studies it would seem important to explicitly go through with

participants the aims of the study, such that they can gain a clearer insight into the experimental research.

4.5 SUMMARY

In summary, the main findings of this study are that the wearing of a mask has the capacity to reduce an individuals' feelings of identifiability and their awareness of their public self. However, whilst there is some evidence that the latter may be a consequence of the former, it would seem that there are a number of other mechanisms by which the mask has the capacity to reduce its wearer's public self-awareness. This is primarily through covering those aspects of the public self --- such as facial expressions or facial characteristics --- that the wearer may be concerned about.

With respect to inhibitions, it seems fairly clear from this study that the mask has the potential to both inhibit and disinhibit its wearer, depending on what it is that the wearer wants to do. If an individual wants to do something but inhibits it out of a concern for mask-able aspects of the public self, then the mask would seem to have the capacity to play a disinhibitory role. However, if they want to do something for which they require mask-able aspects of the public self, then the wearing of a mask is more likely to be experienced as inhibitory.

There is also some evidence from this study that the wearing of a mask has the capacity to bring about changes in how an individual perceives themselves, and certainly strong evidence that they become less aware of their personal and individual identity.

CHAPTER FIVE. MASKING, INHIBITION AND DISINHIBITION: A WORKSHOP STUDY

5.1 INTRODUCTION

5.1.1 Aims

The study reported in this chapter was initially conducted as a means of exploring the hypothesis that the wearing of the mask would facilitate the expression of a particular aspect of the Self: subpersonalities[9]. However, because of the problematic empirical and theoretical foundations of this concept, this line of research was not included in this thesis. Nevertheless, some of the data that emerged from this study provides a useful means of triangulating the findings from the previous study, particularly looking at the question of whether or not a mask inhibits/disinhibits its wearer, and the processes by which this might come about. Furthermore, because this study took place in a workshop context rather than an experimental one, there is an opportunity to assess the ecological validity of the previous findings. Hence, this chapter will present a brief re-examination of the findings from this study, specifically in relation to the dis-/inhibition hypothesis that was developed in the previous chapter. This is as follows:

If an individual has a desire to behave in a particular way, but inhibits that behaviour out of a concern for mask-able facets of their public self, then the wearing of a mask, under conditions in which it reduces those concerns, can be predicted to have a disinhibiting effect. However, if an individual wishes to behave in a way for which they 'require' mask-able facets of their public self, then the wearing of a mask can be predicted to have an inhibiting effect.

[9] Defined as 'semi-permanent and semi-autonomous regions of the personality capable of acting as a person' (Rowan, 1990, p.8).

5.2 METHOD

5.2.1 Design

The experiment used a repeated measures design, with one independent variable of interest: masking. For the purposes of this chapter, the main dependent variable of interest is self-report ratings on a measure of 'uninhibitedness'. However, as part of the initial study, the following items were also used as dependent measures: 'self-conscious', 'immersed in the character' , 'similar to normal waking consciousness', '"fixed" in the character', 'detached from the character', 'trance-like', 'difficult to stay "in character"', and 'like a subpersonality'. Focused group interviews were also conducted to obtain qualitative data about the participants' experience of wearing a mask. For the purposes of this re-examination, the prediction is that the wearing of a mask will bring about both an inhibiting and disinhibiting effect depending on the kinds of factors outlined in section 5.1.1.

5.2.2 Participants

Participants were recruited for the study by advertising a 'Mask and Movement' research workshop at a local dance/personal growth group, which the researcher intermittently attended (the advertising flyer for this workshop can be seen in appendix 5a). The decision not to advertise the workshop to a wider population was taken primarily because of the exploratory nature of the study, and a concern that participants without any experience of 'personal growth' activities might find the experience somewhat difficult. Around 40 percent of the participants were known to the researcher prior the study. The implications of this will be explored in the discussion.

A total of twenty-six participants completed the study. The first workshop was attended by eighteen participants. Two of these participants, however, left after the first two improvisations, and their responses have been deleted from the analysis. A follow-up workshop was attended by a further ten participants. In both workshops, there was an approximately equal mix of males and females.

5.2.3 Apparatus and Materials

Sixteen masks were used for this study. These were all modified 'neutral' masks (see chapter four) with lumps of a moulding material somewhat randomly 'thrown' onto them. The masks had a somewhat disfigured and deformed

appearance (see illustration 5.1). Half of the masks were painted with a mixture of colours and half were painted entirely white[10].

ILLUSTRATION 5.1
Masks used for study

A number of everyday objects were also used in this study as 'props' for the participants to improvise with. These included plastic toys, musical instruments (for instance, tambourines, drums, a triangle), and clothing (for instance, scarves, hats, jumpers).

There were two types of questionnaires used for this study. The first was a 'character questionnaire' (see appendix 5b) which was given to the participants at the end of each improvisation. This gave participants approximately half a side of blank, A4 paper to describe, in as much detail as possible, their masked character. The second half of this character questionnaire asked participants to circle a number on eight different seven-point Likert-type scales, to describe how strongly they

[10] The masks were designed in this way in an attempt to create ambiguous, 'Rorschach-like' masks. However, it is clear that the 'faces' of these masks are not ambiguous, and the possible effects of the mask's appearance will be explored in the discussion. The reason for making both coloured and white masks was to see whether increasing the ambiguity of the masks (with the coloured masks considered more ambiguous) would alter their psychological effect. For the purposes of this re-examination, however, the differences between the white and coloured masks will not be explored.

felt on the following items: 'Self-conscious', 'Immersed in the character', 'Similar to normal waking consciousness', '"Fixed" in the character', 'Uninhibited', 'Detached from the character', 'Trance-like', 'Difficult to stay "in character"'. The scales were anchored at 'not at all' (one) and 'extremely' (seven).

The second questionnaire was a 'subpersonality questionnaire' (see appendix 5c), and asked participants to rate on a seven-point Likert-type scale the extent to which they felt that were expressing a subpersonality, from 'Definitely not a subpersonality' (one) to 'Definitely a subpersonality' (seven). Participants were also asked to explain the reason for their response.

5.2.4 Procedure

After a brief introduction to the workshop (in which participants were told that it was a research workshop on the therapeutic application of masks), personal introductions, 'ground rules' (e.g. 'Don't do anything you don't want to do') and a brief 'warm up', participants were asked to enact four experimental improvisations: two of which were masked, and two, unmasked. This was counterbalanced, such that half the participants were wearing masks in the first and third improvisations, and half were wearing masks in the second and fourth improvisations. Furthermore, of those wearing masks in improvisations one and three, seven wore white masks in improvisation one and coloured masks in improvisation three, and six wore the white and coloured masks the other way around. A similar division occurred for those wearing masks in improvisations two and four. Hence, there were four different sequences (see table 5.1), which led to a relatively counterbalanced design.

TABLE 5.1
Experimental sequences

	Impro. 1	Impro. 2	Impro. 3	Impro. 4
Sequence one (n = 7)	white mask	no mask	coloured mask	no mask
Sequence two (n = 6)	coloured mask	no mask	white mask	no mask
Sequence three (n = 7)	no mask	white mask	no mask	coloured mask
Sequence four (n = 6)	no mask	coloured mask	no mask	white mask

Each improvisation lasted approximately six minutes. In the masked improvisations, participants were randomly assigned one of the five coloured or five white masks, and then asked to look into it until they could identify a face. They were then asked to make their face into the shape of the 'face' they perceived in the mask, and put the mask on. In the non-masked condition, participants were simply asked to think of a character or a personality they might like to improvise. In both masked and non-masked conditions, participants were then asked to put their various body parts (feet, knees, hips, etc.) into the shape of the character, and then to turn around.

Participants were then asked to spend some time exploring the room, and to 'notice' that some objects had been placed in the corner of the room. They were then asked to take one or more of the objects, and to use it/them in whatever way they desired.

In improvisations one and two, participants were asked not to interact with the other mask-characters in the room. In improvisations three and four, these instructions were slightly modified. Participants were asked to also be aware of the other characters in the room, to find a partner, and to 'show' their object to that partner. They were then given an opportunity to interact more freely with the other characters and objects. After each improvisation, the participants were asked to spend about ten minutes completing the character questionnaire. At the end of all four improvisations,

participants were asked to complete the subpersonality questionnaire.

Finally, participants were asked to come into the centre of the hall to form a circle, and a focused group interview (Merton, Fiske and Kendall, 1956), of around fifteen minutes duration, was conducted. The main question here was what differences the participants had experienced between the masked and non-masked conditions. Probes and follow-up questions were also used by the researcher.

5.2.5 Method of Analysis

5.2.5.1 Quantitative

There was fifteen instances of missing data on the dependent measures. These were all given a midpoint value of four. Frequency charts showed an acceptably normal distribution of scores on all dependent variables. The quantitative data was therefore analysed using a repeated measures multivariate analysis of variance on version seven of SPSS. This had two within-participant factors: masking, and individual (first and second improvisation) versus interacting (third and fourth improvisation) conditions. One between-participants factor was also introduced into the analysis: sequence (sequence one versus sequence two versus sequence three versus sequence four).

5.2.5.2 Qualitative

Data from the qualitative interviews was transcribed by the researcher and then broken down into sentence-based text units. The text units were then coded using NUD•IST into the node hierarchy developed in the previous study (transcribed and coded group interview from the second experimental workshop [1/7/95] can be seen in appendix 5d). Where appropriate, the nodal hierarchy was modified or new nodes were added.

5.3 RESULTS

5.3.1 Quantitative

Multivariate tests using Wilk’s lambda found significant effects only for the individual (first and second improvisations) versus interacting (third and fourth improvisation) conditions (see table 5.2). A more detailed print-out of the SPSS analyses can be seen in appendix 5e.

TABLE 5.2
Multivariate tests for between-participant and within-participant variables

Variable	F	Hyp. df	Error df	p
Between-participants				
Sequence	2.00	27	41.53	.29
Within-participants				
Masking	.97	9	14	.50
Masking × Sequence	1.07	27	41.53	.41
I/I	4.06	9	14	.010
I/I × Sequence	.93	27	41.53	.57
Masking × I/I	.74	9	14	.67
Masking × I/I × Sequence	.85	27	41.53	.67

Note: I/I = individual (first and second improvisations) versus interacting (third and fourth improvisation) conditions

Univariate tests on the I/I factor found just one significant difference, with participants significantly more trance-like in the individual (first and second) improvisations, as compared with the interacting (third and fourth) improvisations ($F[1, 22] = 18.21$, $p = .00031$).

For descriptive purposes, table 5.3 shows the mean scores and standard deviations for all the dependent measures in the masked and non-masked conditions. Table 5.4 presents a table of correlations for the dependent measures.

TABLE 5.3
Mean scores and standard deviations on dependent measures

	Masked		Non-masked	
Measures	M	SD	M	SD
Uninhibited	4.48	1.38	4.25	1.23
Self-conscious	2.65	1.29	2.69	1.26
Immersed in the character	4.46	1.41	4.46	1.21
Detached from the character	3.52	1.31	3.04	1.20
Trance-like	2.77	1.32	2.40	1.01
Similar to normal waking consciousness	3.15	1.13	3.44	1.40
'Fixed' in the character	4.35	1.17	4.12	1.41
Difficult to stay 'in character'	2.90	1.10	3.27	1.30
Like a subpersonality	4.96	1.16	5.27	1.20

TABLE 5.4
Pearson correlations for dependent measures (n = 104)

	UNINHIBIT.	S-C	IMM	DET	TR	NORM	FIXED	DIFF
Self-conscious	-.38*							
Immersed in character	.14	-.40*						
Detached from character	-.08	.39*	-.19					
Trance-like	.14	-.09	-.08	-.15				
Similar to normal waking consciousness	.14	.05	.02	.17	-.28*			
Fixed in character	.23*	-.21*	.35	-.12	.12	-.11		
Difficult to stay 'in character'	-.23*	.46*	-.48	.35*	-.29*	.23*	-.45	
Expressing subpersonality	.21*	-.01	-.01	-.34*	.06	.17	-.19	-.05

Note: *p < 0.05. Exact p values can be seen in appendix 5e.

5.3.2 Qualitative

A final table of nodes and the number of text units coded at each node can be seen in appendix 5f.

5.3.2.1 Inhibition

Overall, 35 text units, or nineteen percent of the text units in total, were coded under the node address of 'inhibition/reduced'. This includes participants who said that they felt 'liberated' when wearing the mask (2:23), more confident (2:29), or that it opened up 'enormous possibilities' (2:27) for them. It also includes participants who said that they felt more able to take risks when wearing the mask (1:2; 2:46) or that the mask gave them 'license' to do something (2:25). Other text units categorised under this title referred more specifically to the disinhibition of antisocial behaviour (1:86), with participants stating that they felt that the mask gave them permission to be 'naughty' or 'rude' (2:40), or that they found it easier to be horrible to somebody when wearing a mask (1:92). Finally, included under this category were text units in which participants said that the characters they enacted when wearing a mask were more 'negative' (1:6, 2:31), 'darker' (1:2), nastier (1:23), less rosy (2:34), or deeper (1:2; 1:48; 1:51), or that they felt safer playing more exaggerated characters (2:29).

In terms of reasons why participants felt less inhibited in the masked condition, in three text units there was a

connection drawn between disinhibition and reduced identifiability. In only one of these, however, was this expressed as a direct causal relationship from latter to former: 'A mask to hide behind, to bring out the negative sides of myself more' (1:6). In contrast, text unit 2:29 simply talks about anonymity and greater confidence as co-consequences of wearing a mask, and text units 2:91 to 2:92 state that disguise is not the only reason why someone might choose to wear a mask if they were committing atrocities. Hence, in only one of these text units was a specific connection between reduced identifiability and reduced inhibitions made, and in all the role of reduced public self-awareness was somewhat unclear.

Another reason for feeling greater license to be antisocial when wearing the mask, as given in two consecutive text units (2: 40-41), seemed to be that a mask restricts how much a wearer can see of those she is interacting with. Hence, because the other can not be seen as well, there may be a tendency to worry less about their well-being. The consequence of this is that it may be easier to then treat them in a more depersonalised manner.

A third reason given in four of the text units as to why participants became less inhibited when wearing a mask was to do with the specific cues inherent in the mask. In three consecutive text units (2:31-33), this was to do with the mask as mask, per se; in that, when developing a character, the participant thought to himself, '"Well who would wear a disguise?"' (2:31), and subsequently developed a character that was 'a rather furtive suspicious person who was kind of snooping around' (2:32). In text unit 1:2, a participant tied this down to the more specific appearance of the masks used in this study, saying that the development of darker and more riskier characters may partly have been due to the way that the mask looked.

In contrast, fourteen text units, or around seven percent of the text units in total, were coded under the category 'inhibition/increased'. This included participants who said that, in the masked condition, they felt more inhibited (2:17), more restricted in their character-development (2:38; 1:76-80), less free (1:52), more frustrated (1:34), or found it more difficult to interact in the way that they wanted to (2: 29-30).

In terms of reasons why participants felt more inhibited when wearing a mask, three text units referred to the

difficulties that arose as a consequence of not being able to use facial expressions to communicate (2:29-30; 1:34). Text units 2:29-30 also referred to the fact that, without the mask, communication was easier because there wasn't a 'wall' between people.

In ten of the text units coded under increased inhibition, this increased sense of restrictedness was related to a sense of the mask imposing (1:52) a particular inflexibility of character on to the mask-wearer such that there wasn't the freedom to develop or expand the character in a way that seemed desirable. One participant, for instance, talked about getting 'pulled' by something and wanting to laugh, but then feeling that that was out of character with the mask (1:77-78). The consequence was a feeling of then having to stop and 'get back in to the "thingy"' (1:74).

Finally, one text unit (2:30) referred to the fact that the limited vision beneath the mask made it more difficult to 'read the whole message that you're getting' from others, such that communication was impaired.

Two text units specifically referred to the fact that participants felt neither more nor less inhibited when wearing a mask: 'I was equally in to them with or without the mask --- some were nasty and some were nice' (1:15), 'I didn't feel able to break out... with or without the mask' (1:108).

With respect to levels of inhibition, the only intervening variable of interest that emerged, in two consecutive text units, was that one participant felt more able to be 'horrible' to those people who were wearing a mask because he, 'couldn't see what they felt really' (1:93). 'So when I was unmasked I could do things to people who had a mask, which I don't think I did to people who didn't have a mask on' (1:94).

5.3.2.2 Transformation

Thirteen text units, or seven percent of the text units in total, were coded as expressing an increased experience of transformation in the masked conditions. This includes those text units in which participants said that they could 'get into' the characters more easily with a mask (1:2; 1:4; 2:20), that they experienced more license to <u>be somebody</u> when wearing a mask (2:25) (as opposed to more license, <u>per se</u>), or that the characters they enacted when wearing a mask were more extreme and less like themselves (1:7-13). It also includes two text units in which participants talked about 'immediately'

becoming a different sort of character (2:27) or 'immediately' changing (2:52) when wearing the mask.

Only one participant hinted at a reason for feeling a greater sense of transformation in the masked condition. This was based on the change in physical appearance. She said it was 'As if somebody just said, "OK you can be this person now because you look like that"'.

In contrast, nine text units, or five percent of the text units in total, were coded as expressing a reduced sense of transformation in the masked conditions. This included participants who said that, in the masked conditions, they couldn't get into characters as well (1:33; 2:15), found it more difficult to stay in character (1:77; 2:16), or more difficult to identify with the mask character (2:36). It also includes a text unit in which a participant said that she felt the characters in the mask were closest to herself (1:33).

Two reasons were given for why participants experienced less of a sense of transformation when wearing the mask. In two consecutive text units, one participant described how there wasn't '...much to grasp on to...' (2:16) with the features of the mask, and this contrasted with the non-masked condition, in which she could choose to enact characters that she knew well.

For another participant, the main reason why it was more difficult to remain in character when wearing the mask was because, as categorised under inhibition/increased/why?/character restricted, there was a sense of not being able to naturally develop the character because certain expressions or gestures were 'out of character with the mask' (1:76-78). Indeed, in some respects, all those text units in which participants said that they felt more inhibited in the development of their character when masked could have been categorised here under transformation/reduced/why?/character restricted. However, apart from in the case of text units 1:76-78, participants were not generally saying that, in the masked conditions, they felt less transformed, but that they felt less transformed in the direction that they wanted to be transformed, and more transformed in the direction that they did not want to be transformed. Indeed, in some of these cases it may have been appropriate to actually code these text units under greater transformation, where participants, for instance, were saying that they felt the mask 'imposed' a character on them (2:52), or that they 'couldn't' move out of the character of the mask (1:73).

Other text units coded under 'transformation' were more related to the specific masks that the participants were wearing, and the difficulties that the participants had finding characters in these masks. These can be seen in appendix 5f.

5.3.3.3 Other Findings

Of the 37 text units coded under miscellaneous, 34 were coded under the node of 'expressing self-aspects'. However, no text units were coded as saying either that there was an increased or decreased expression of subpersonalities in the masked conditions. However, participants did talk about the kinds of subpersonalities expressed. In three separate text units, participants talked about the mask bringing out more 'negative' (1:6; 2:31) or less 'acceptable' (1:39) sides. In seven text units, participants said that the parts of themselves expressed in the masked condition were 'deeper' (1:51) --- i.e. parts they were not very 'in touch with' (1:39). In comparison, those aspects of themselves expressed in the non-masked conditions were described as being more 'superficial' (1:48) --- such as 'personas' (1:48) and possible selves (1:50) --- parts that were quite close to themselves (1:7), or parts of themselves that they 'could see' (1:38). Finally, in two consecutive text units, one participant talked about expressing a 'mask' subpersonality in the masked condition:

> It may be that some of us have a subpersonality that is about wearing a mask, so that when you talk about being alienated or cut off from people, then that might be actually a character to explore... the part of you that feels anonymous and you can go to a big gig or something and behave how you want --- that there might be an anonymous character in itself. (2:53-54)

The other text units coded under 'expressing aspects of Self' were primarily related to the difficulties participants had in responding to the questions about subpersonalities (see appendix 5f), such as what was and what wasn't a 'subpersonality'.

5.4 DISCUSSION

5.4.1 Hypothesis one: If an individual has a desire to behave in a particular way, but inhibits that behaviour out of a concern for mask-able facets of their public self, then the wearing of a mask, under conditions

in which it reduces those concerns, can be predicted to have a disinhibiting effect. However, if an individual wishes to behave in a way for which they 'require' mask-able facets of their public self, then the wearing of a mask can be predicted to have an inhibiting effect

As with the study in chapter four, the qualitative data from this study clearly indicates that a mask can serve to both inhibit and disinhibit its wearer. At a descriptive level, the quantitative data from this study also suggests that the wearing of a mask does not bring about an overall disinhibiting effect. Rather, it has the potential to both inhibit and disinhibit its wearer. Given that this study was conducted in a workshop setting, one that is closer to a 'real world' mask-wearing environment than the setting of the chapter four study, the findings from this study enhance the ecological validity of the chapter four findings.

From the qualitative data, it is not entirely clear why several participants felt less inhibited when wearing a mask. As with the chapter four study, reduced identifiability does not seem to have been a major factor. Most likely, this was because mask-wearing participants knew that others could easily identify them, either because those others had seen them prior to putting on the mask, or because those others could identify them once their masks had been taken off. Hence, identifiability was not particularly dependent on immediate facial recognition. Again, however, this finding does raise the question of how much of a disinhibiting effect masked anonymity is likely to have in a 'real world' situation. If masked participants in the present setting experienced little anonymity-based disinhibition, it seems unlikely that individuals in a therapy or drama group would experience that much more, unless the situation was very specifically contrived for this purpose (e.g. participants were not allowed to meet before wearing masks).

Contrary to the findings of chapter four, a reduction in public self-awareness did not seem to be a particularly prevalent reason why participants in the present study felt less inhibited. This was probably because the design of the workshop --- particularly in the non-interacting conditions --- did not invoke in the participants a concern with mask-able aspects of their face. In contrast to the study in chapter four, where the participants were acutely aware that people were looking at their facial expressions, facial awkwardnesses, etc., participants in the present study were frequently acting alone, and

therefore had less reason to concern themselves with how their faces might look. The fact that mean ratings across the conditions for 'self-conscious' was only 2.67 on a seven-point scale somewhat supports this interpretation.

However, this raises the question of how ecologically valid the findings from the previous study are likely to be. If an individual is not particularly concerned with mask-able aspects of their face in the present setting, how concerned are they likely to be in a carnival context, or in a therapy group? As suggested in section 4.4.2, it seems likely that this concern with mask-able aspects of the face --- and its subsequent reduction through the wearing of a mask --- will only come about in quite specific circumstances. Again, questionnaire research of the kind discussed in that section would be a very useful means of identifying exactly the kinds of situations in which the mask might be expected to recued public self concerns.

One of the most interesting things that emerged from the qualitative data was two further reasons as to why a mask might disinhibit its wearer, neither of which were to do with a reduction in public self-awareness. The first of these seemed to be that, because the mask-wearer could not see others so well through the mask's eye-holes, it was easier to treat the other in a more depersonalised way. To explore this further, it might be very interesting to compare the effects of small-eye holed masks and large eye-holed masks on how prepared individuals would be to behave in a way contrary to their public self ideal (a study which would, of course, raise numerous ethical problems).

The other reason given why the mask might disinhibit its wearer was because the wearer might use the wearing of a mask itself as a character-cue, and hence develop a 'disguise-wearing' character. This might be a furtive, snooping and somewhat anti-social character, as one of the participants in the present study developed; but it might also be the kind of character that has a love of danger: for instance, someone like the Lone Ranger, Batman or Zorro. This disinhibition-pathway is particularly interesting because it suggests that the relationship between the experience of wearing a mask and the social representations of wearing a mask is not just uni-directional but bi-directional. That is, cultural representations of who wears a mask, or what it is like to wear a mask, may somewhat determine how individuals respond to the experience of mask-wearing.

In terms of disinhibition, it was also interesting to note that one of the non-masked participants talked about finding it easier to be 'horrible' to those people wearing a mask because he couldn't see their faces. This raises the possibility that the mask-wearer may become less inhibited as part of an on-going intersubjective dialectic: they are treated by others in a less inhibited manner, and therefore behave to others with less reservations. Indeed, at an anecdotal level, it is tempting to suggest that such a process may be an important factor in the disinhibition of mask-wearers in ritual, carnival and fiesta contexts. There, mask-wearers do not act alone, they are always fundamentally in relation to a non-masked audience, and the relation of the audience to the mask-wearer is frequently one of goading, teasing, laughing, ridiculing, or hostility (see, for instance, Mead, 1970). Hence, it would be very interesting to look at how people view individuals wearing a mask. Do they find it easier to be 'nasty' to them because they can't see how they are feeling? If so, then this may have substantial implications for how an individual experiences wearing a mask.

In terms of disinhibition, it also seems likely that this was partly brought about by the specific appearance of the mask that the participants were asked to wear. It is easy to see how 'darker', 'nastier', 'ruder' or 'less rosy' characters may have emerged as a direct response to the fragmented, disfigured, alien appearances of the masks. On the other hand, one could not go so far as to say that all the responses coded under inhibition/reduced can be attributed to the mask's appearance: for instance, it is difficult to see how feelings of 'greater confidence', 'liberation' or enormous possibilities could be attributed to these particular appearances.

Nevertheless, one of the clear design faults in this study is that the act of looking at a mask was confounded with the act of wearing a mask, such that it is not clear whether the effects are due to the actual wearing of the mask, or whether they are due to the different ways in which participants were asked to 'find' a character. In future studies looking at the effects of <u>wearing</u> a mask, therefore, it would seem essential that the only difference between experimental and control groups is that the former wear a mask whilst the latter do not. In the present study, this means that a much more appropriate control condition would have been to have the participants look at the same masks, find a character in the mask, but then <u>not</u> wear it.

In terms of the mask's ability to inhibit its wearer, the findings from this study triangulate well with the findings from the previous study, that if an individual wishes to behave in a way for which they 'require' mask-able facets of their public self, then the wearing of a mask can be predicted to have an inhibiting effect. As with the previous study, one of the main reasons why this seems to have occurred was because it interfered with participants' ability to communicate through their face. The sense of having a 'wall' between self and others also emerged as one of the main reasons why the wearing of a mask was experienced as inhibiting. One of the participants also said that the limited vision beneath the mask made it more difficult to read what others were saying or gesturing.

However, in contrast to the chapter four study, the most frequent reason that participants gave in the present study for feeling more inhibited in the masked condition was because it stopped them using their face to develop their characters in the way they wanted to. That is, they wanted to smile or laugh or make some facial expression, but were inhibited from doing so because it was incongruent with their 'face'. This finding is of some relevance in terms of the use of masks in drama. As can be seen in section 2.1, drama teachers like Appel (1982) often talk about the way in which the mask can liberate their students, but what is less frequently mentioned is the possibility that the wearing of a mask can also inhibit their students from developing their characters in the way that they want to: specifically when that character requires particular facial expressions that are incongruent with the mask.

5.4.2 Transformation

The qualitative findings from this study suggest that the wearing of a mask has the potential to both increase and decrease the extent to which an individual feels transformed into another character. This is somewhat corroborated by the quantitative data which, at a descriptive level, shows that there is no overall increases in feeling fixed or immersed in a character when wearing a mask, and no overall decreases in feelings of detachment from the character or difficulty staying in character.

However, because the experimental and control conditions differed on more than just the wearing or not wearing of a mask, it is very difficult to infer from these findings what the transformative effects of wearing a mask, per

se, might be. It may have been, for instance, that participants found it easier to develop into a character in the non-masked condition because they could think of any character they wanted to, as opposed to having to 'find' a character in the somewhat fragmented and disfigured masks. Certainly, a number of participants said that they found it very difficult to find a character in the masks used in this study (see appendix 5f). Again, then, for future studies along these lines, it would seem essential that a control condition is one in which an individual has to find a character in a mask, but then does not wear the mask.

Furthermore, in the present study, both the qualitative and the quantitative measures assessed the extent to which an individual felt transformed into a character, which may not be the best means of assessing the transformative effect of wearing a mask. This is because, as was found in the present study, if an individual very much wants to develop one character, but the mask is pulling them in another direction, then the net effect of wearing a mask might be to reduce the desired transformation, even though the mask is actually having a very strong transformative effect of its own. In this respect, in future studies, it might be more informative to ask people, 'How much they feel transformed in the direction represented by the mask', rather than how much they feel transformed, per se. This should give a better indication of how much a mask 'pulls' its wearer in a particular direction, and avoid a confusion between the transformation that the mask-wearer desires, and the transformation that the mask actually brings about.

5.4.3 Other Findings

From both the qualitative and quantitative data, there was no support for the hypothesis that the mask facilitates the expression of aspects of its wearer's Self. Participants did talk about the mask bringing out different aspects of the Self, but apart from 'deeper' aspects and 'anonymous' aspects, this can be accounted for in terms of the particular appearances of the masks that were worn. Furthermore, from the qualitative responses, it was evident that asking questions about subpersonalities raised a number of fundamental methodological and epistemological difficulties --- such as what is, and what isn't, a 'subpersonality' --- problems that would need to be overcome before further research into this aspect of the mask's psychological effect was examined.

5.4.4 General Methodological Issues

With respect to internal validity, there was no attempt at the time of conducting this study to assess, or minimise, the possible impact of demand characteristics or experimenter-expectancy effects. The latter may have been particularly problematic, given that a number of the participants knew the researcher, and that it was the researcher who conducted both of the workshops. Given, however, that the primary agenda at the time of conducting the study was to explore whether the wearing of a mask facilitated the expression of subpersonalities, it seems unlikely that the findings regarding inhibition/disinhibition and transformation were particularly influenced by these experimental artefacts.

With respect to diachronic reliability, the findings in this study triangulate relatively well with the findings from the study in chapter four, particularly in relation to the issue of when participants might feel inhibited when wearing a mask. The findings from this study also suggest that the nodal hierarchy developed in chapter four has a degree of situational generalisability, and is a framework that could be extended beyond these two particular studies.

On reflection, there are numerous ways in which this study could have been improved methodologically. First, as already stated, the control condition could have been more exactly matched to the experimental condition: participants could have been asked to find a character in the mask, but then not wear it. Second, the effects of wearing a mask in individual and interacting conditions could have been isolated from order effects, perhaps by randomising when participants were asked to act alone, and when with others. Third, given the highly interactive nature of facilitating this workshop, it would have been much better if it had been run by someone other than the researcher; or, if the researcher had facilitated it, it would have been an idea to have a co-researcher give out the questionnaires and conduct the interviews. Fourth, the dependent measures should have been much more specific to the hypotheses being tested. There are a number of items that it would have been very interesting to introduce into the character questionnaire, such as measures of identifiability, public self-awareness, and the extent to which the participants felt 'transformed into the character represented by the mask', and it was unfortunate that these items were not used. In terms of the focused interviews, it would have been an idea to record which participants said what, so that the numbers

of participants coded at each node could have been assessed. Also, given the richness of material that emerged from these interviews, they could have been much longer, and with a more structured series of questions.

With respect to catalytic validity, there was a somewhat mixed response from participants at these workshops. To some extent, there was a sense that some participants got a bit bored or frustrated having to do similar improvisations four times. Also, there was a sense in which many of the participants did not find the 'ambiguous' masks particularly stimulating or interesting, because they were so difficult to see a character in. At the same time, quite a few participants found the workshops useful, interesting and memorable, in that it helped them identify new 'aspects' of themselves (both in the masked and non-masked conditions), and that they had developed some understanding of what it was like to work with masks.

5.5 SUMMARY

The findings from this study triangulate relatively well with the findings from the previous study, and replicate the finding that individuals can feel both disinhibited and inhibited when wearing a mask. In terms of reduced inhibition, there was little evidence to suggest that this was a consequence of reduced concerns with facets of the public self. However, this was probably more a failure of the experimental design to adequately test this hypothesis than a failure of the hypothesis itself. Three other reasons, though, did emerge as to why an individual might feel more disinhibited when wearing a mask. First, she may see others less easily and therefore find it easier to treat them in a depersonalised way. Second, she may develop a less inhibited character on the basis of thinking, 'Well, what kind of person would wear a mask'. Third, she may behave in a more disinhibited way as a reaction to her observers behaving towards her with less inhibitions.

In terms of increased inhibition, these studies support the prediction that this is likely to occur if an individual wishes to behave in a way for which she requires mask-able facets of her public self. As well as requiring these facets for communication, however, this study has also found that these facets may be required for the development of a dramatic character.

Finally, this study suggests that the mask may be able to both increase and decrease the extent to which its wearer is transformed into a character. However, to effectively test the transformative effect of wearing a mask, per se, it would seem necessary to look at how much the mask transforms its wearer in the direction represented by the mask.

CHAPTER SIX: TRANSFORMATION AND SELF-PERCEPTION

6.1 TRANSFORMATION

As the review in chapter two indicates, along with disinhibition, the most frequently hypothesised psychological effect of a mask is that it 'transforms' its wearer. This chapter will examine the empirical evidence in support of this general hypothesis, and then go on to look in more detail at one particular mechanism by which it has been hypothesised that this transformative effect comes about. This is the hypothesis, outlined in 2.2.1, that a mask transforms its wearer psychologically because it transforms the way in which she perceives herself physically.

6.1.1 Direct Empirical Support

What empirical evidence is there that the wearer of a mask experiences some form of transformation? As Honigman (1977) notes, very little. He writes, 'Few psychologists or anthropologists have gone far into the psychological concomitants of facial disguises with the result that evidence supporting the claim that masks act on the sense of personal identity is scarce and largely indirect' (p.273). This scarce and indirect evidence tends to fall into two camps.

The first of these is observational data, presented by such authors as Caillois (1962) and Honigman (1977), which is used to suggest that masked individuals experience some form of behavioural or dispositional transformation. Napier (1986) also states that, 'The ethnographic literature is filled with instances...of people "actually becoming" the spirits, the dead, or whatever the mask was meant to give life to' (p.27).

However, such observational data --- anecdotal and unsystematic as it is --- encounters many of the same difficulties as the ethnographic data used to support the hypothesis that the mask disinhibits its wearer. First, one must be extremely cautious in attempting to interpret non-western phenomenon in terms of western discourses. Second, observational data can only inform the theorist about the mask-wearer's behaviour, and not aspects of his private self such as affect or self-concept. Third, anecdotal observation of behaviour under one mask can not

legitimately be generalised to all masks. Fourth, and perhaps most importantly, a co-variance between the presence of a mask and the phenomenon of transformation can not be taken to imply a causal relationship from the former to the latter both due to the third factor problem, and the problem of establishing the direction of causality.

A second line of empirical evidence in support of the hypothesis that the mask transforms its wearer, however, would seem somewhat more valid. These are phenomenological self-reports, in which the mask-wearers themselves describe a subjective sense of transformation when wearing a mask. Honigman (1977), for instance, quotes a Trinidadian masquerader who states that, when masked, he becomes, '"a different being entirely"' (p.273); and details a similar level of subjectively-experienced transformation in a Hopi Indian. Ray and Shaw (1987) also present an account of subjectively-experienced transformation as a consequence of wearing a mask. This is by John Nwamba, bearer of the Onumonu Ezeugwuorie mask during the 1984 Nsukka Igbo masquerade:

> If I carry it [i.e. wear the mask], what I see other people do not see. And the character I display, other people do not, because if a gallon of palm wine is brought and put into my mouth, I can finish it, and another person cannot. And if you bring a tin of oil; I can take it and drink it, and another person cannot drink it. And there is nothing it will do to me. That is how I am different when I am in it. I understand people differently because when I look at them, my eyes will be spirit eyes (enya ma), not like people's eyes (enya mmadu). (p.659)

Phenomenological self-reports from western mask-wearers --- using the masks primarily in a dramatic context --- also demonstrate a possible link between mask-wearing and transformation. Johnson (1980) reports his wife, for instance, as stating:

> I get very high on Mask work --- it's like stepping out of my skin and experiencing something much more fluid and dynamic --- sometimes when the Mask is turned on there is a part of me sitting in a distant corner of my mind that watches and notices changed body sensations, emotions, etc. But it's very passive, this watcher --- does nothing that criticises or interferes --- and sometimes its not there at all. Then it's like the "I" blanks out and "something else" steps in and experiences. (p.175)

Such phenomenological self-reports have the advantage over observational data in that a clearer link is being made --- and by the mask-wearers themselves --- between the act of wearing a mask and a particular transformation. These self-reports also give a clearer insight into subjectively-experienced transformation, as opposed to changes at the purely behavioural level. The problem with these self-reports, however, is that they are still effectively correlational. Johnson's wife, for instance, states that it is the Mask-work --- which includes many other activities apart from the wearing of a mask --- which gives her a sense of stepping out of her skin. Hence, such self-reports can not be used to support the hypothesis that the wearing of a mask brings about a transformation, because the transformation may be due to a third variable, or the experience of transformation may necessitate the wearing of a mask. In addition, such self-reports have the problem of generalisability: both from one mask to masks in general, and from one person to the population as a whole.

Whilst these self-reports demonstrate, therefore, that an individual may feel transformed when wearing a particular mask, they do not really show that it is the wearing of a mask which is responsible for this felt-transformation. Perhaps the clearest evidence for this at present is the findings from the previous studies in this thesis, particularly the study in chapter four, which showed that around ten percent of a sample of individuals did report a subjectively-experienced loss of identity as a direct result of wearing a mask.

Furthermore, there are a number of studies in the psychological literature which show that masking-like changes in appearance can bring about changes at a subjectively-experienced level. This chapter will now review these studies.

6.1.2 Facial Coverings

Perhaps the phenomenon that is closest to that of wearing a mask is the covering of the face with such non-mask objects as spectacles, monocles, eye-patches, beards, moustaches, tattoos, make-up and face-paints. Structurally, this process of facial covering is similar to that of wearing a mask, differing only in the fact that these objects either cover a smaller area of the face, or that they are worn <u>on</u> the face rather than <u>over</u> the face. With respect to the first of these differences, one might therefore infer that, whatever the effect of

wearing these objects is, the effect of wearing a mask is going to be similar but magnified. With respect to the second difference, given that the 'wearing' of these objects, like that of the mask, is unlikely to involve major physiological processes (apart from at the time of application), there is unlikely to be a great deal of difference between the psychological effect of wearing something over the face versus the psychological effect of wearing something on the face.

Perhaps the most empirically rigorous and relevant study is by Kellerman and Laird (1982), investigating the psychological effects of spectacle-wearing. Under the cover story of testing the perceptual effects of a new plastic, the experimenters asked participants to complete two simple tasks in front of a mirror, either wearing or not wearing a pair of spectacles containing clear, non-corrective lenses. In actuality, participants did no better at the tasks in the spectacle-wearing condition than in the non-spectacle wearing condition. However, in the former condition, Kellerman and Laird found that participants rated their performance as superior; and also rated themselves as more stable, competent, scholarly, humorous, rigid and less seductive. Kellerman and Laird argue that these changes in self-perception that the wearing of spectacles brought about are veridical to cultural conceptions of spectacle-wearers: i.e. that they are more intelligent (Argyle and McHenry, 1971), industrious and honest (e.g. Manz and Luek, 1968).

This finding may have substantial implications for the possible psychological effects of wearing a mask. However, there are a number of reasons why the findings from this study must be treated with some caution.

First, there is a methodological weakness in this study, in that participants in the experimental condition --- but not in the control condition --- were told that the spectacles might interfere with their performance. This was a means of attempting to compensate for any possible demand characteristics that might have arisen through the wearing of the spectacles. However, there is a small possibility that it may have produced a reactance effect: in that participants in the experimental condition may have said that they did better as a means of compensating for the expected interference.

Second, in terms of ecological validity, it is important to note that participants in this study were sitting directly in front of a mirror, and therefore were acutely aware of their transformed appearance. This means that

the findings from this study can not really be generalised out to all spectacle- or mask-wearing contexts, because often the wearer will not be particularly aware of how they look.

Third, the results from this study show that only some individuals respond to this experimental manipulation. Kellerman and Laird (1982) hypothesised, and found, that this transformation in self-perception only held for participants who were more responsive to 'self-produced cues'. These are cues that, 'arise from the individual's own actions and personal properties, including visceral responses, expressive behaviours, overt actions, and the consequences of those actions' (p.298). On the other hand, participants who were more responsive to 'situationally produced cues' --- 'normative or conventional definitions of how most people will or should feel, believe, and so on, in that particular situation' (p.298) --- were found to be either unaffected by the glasses or showed an opposite reaction.

Some support for the findings of Kellerman and Laird (1982) comes from two other studies. Terry (1990) found that long-term spectacle-wearers considered themselves less affectionate, brave, domineering, or stubborn than either contact-lens wearers, or a visually non-corrected control group. Again, this suggests that facial coverings may affect the way an individual perceives themselves, though the correlational nature of these findings means that the results are more open to interpretation. Adopting a more experimental design, Gording and Match (1968) found that 70% of patients showed a 'positive change' --- on the House-Tree-Person projective test --- when switching from spectacles to contact lenses. However, because no control group was employed in this study, there may be numerous other explanations for this change in a positive direction.

A more carefully controlled study was conducted by Wood (1986), who looked at the psychological effects of wearing a beard. Twenty male participants were given a coloured theatrical beard to wear, twenty male participants were given a black bandanna 'outlaw-style' to wear, and twenty male participants did not have their faces manipulated in any way. All participants were then asked to look at themselves in a mirror for one minute, and then to complete a Bem's sex-role inventory. Based on the reported finding that, 'Men tend to perceive a beard as adding power, maturity and emotional distance to the wearer' (p.769), Wood hypothesised that the bearded men would perceive themselves as more masculine that the

control group. This prediction was confirmed by his findings. Moreover, to show that this increase was not the result of the beard acting as a disguise, Wood pointed to the fact that there was no significant difference between the bandanna and control groups.

Such results, like the findings of Kellerman and Laird (1982), suggest that a mask-like facial covering may transform an individual' sense of self. However, there are three limitations to this study. First, Wood (1986) does not develop a strategy for identifying the possible role of demand characteristics. Hence, it may be that participants wearing the beard were simply more aware of the aims of the study, and therefore tended towards confirming the experimental hypothesis in their responses. Second, as with Kellerman and Laird, there is the problem of ecological validity. Bearded men are unlikely to spend large amounts of time in front of a mirror looking at themselves, and therefore the results may be highly situation-specific. Third, the finding that the bandanna-wearing participants did not rate themselves as more masculine than the control participants somewhat questions the hypothesis that a mask can transform its wearer. Assuming the outlaw-style bandanna had a somewhat macho appearance, then it should have also transformed the wearers' self-perceptions in the masculine direction. Why it didn't is difficult to explain.

Along with spectacles and beards, there is also some evidence that the wearing of make-up can transform how an individual feels about themselves. Graham and Klingman (1985) found that elderly subjects, after a one-hour make-over, rated themselves as more socially confident and having a more positive outlook on life. Unfortunately, without a comparable control group who experienced equal levels of attention without being made up, and with the problem of demand characteristics, these findings are difficult to interpret. However, Jouhar and Graham (1985) found that female subjects across an 18-60 age range would frequently and directly express such statements as, 'I feel more confident with make-up on', or 'I feel better about myself with make-up on'.

Each of the studies discussed in this section have their limitations. Triangulated together, however, they do seem to provide some strong support for the hypothesis that wearing a mask-like object over one's face can bring about a change in one's self-perception. This is provided, however, that the individual is very aware of how their face is looking. Also, there is some evidence

to suggest that some individuals may be more responsive to this change in facial appearance than others.

6.1.3 Transformations of the Face Which do not Directly Involve Physiological Feedback

Covering the face with non-mask objects is, perhaps, the closest one can get to the phenomenon of masking. However, transformations of the face which do not directly involve immediate physiological feedback --- such as facial disfigurements --- also share a central feature of masking. This is, that the face --- or part of it --- is changed and replaced by another face. Furthermore, unlike facial coverings, these transformations do not, by definition, involve less of the face than a mask.

In looking at these changes, however, one has to be more cautious in extrapolating to masks than with facial coverings. This is because the individual's face is not just replaced by a face-like object, but is replaced by the individual's actual face. This means that the individual may be much more identified with their new 'face' than they would be with a mask. Also, the face is likely to have the appearance of a real face, which may make its effect very different to that of an artificial mask.

One source of data which shows the effects of facial transformation (which do not involve immediate physiological feedback) comes from self-reports of individuals who have directly experienced facial disfiguration. Partridge (1990, 1991, 1993) --- who suffered severe burns and extensive reconstructive surgery around the age of twenty --- is one of the most widely published authors. He states that facial disfiguration can bring about 'inner scars', changing the way an individual feels about themselves, severely denting their self-esteem, and threatening their sense of self-worth, self-respect and self-liking (1993).

Partridge (1990) clearly relates this 'inner scarring' to the effects of seeing one's facial appearance transformed. On seeing one's new face for the first time in a mirror, he writes, 'It is at once a shattering, awful, sad second. You will be horrified. It will take your breath away. It will send a shiver down your spine' (1990, p.12). Partridge (1993) also notes that surgery which reduces the level of facial deformity can have dramatic effects on the way the individual feels about herself.

It might be argued that the experience of wearing a mask will be fundamentally different to the experience of 'facial transformation' that Partridge and others have experienced, on the grounds that, when wearing a mask, one knows that one's real face is still the same. However, one case of facial transformation without immediate physiological feedback, in which the 'wearer' knew that the new face was not 'his', is that of John Howard Griffin, author of Black Like Me (1961). Griffin, a white American journalist, decided to get a truly 'inside' understanding of racism by temporarily 'becoming' a black man himself. He did this through weeks of ultra-violet treatment and pigmentation medication. On seeing his new 'face' for the first time in a mirror, Griffin, like Patridge, experienced a marked transformation in the way that he saw himself.

> In the flood of light against white tile, the face and the shoulders of the stranger --- a fierce, bald, very dark negro --- glared at me from the glass. He in no way resembled me.
>
> The transformation was total and shocking. I had expected to see myself disguised but this was something else. I was imprisoned in the flesh of an utter stranger, an unsympathetic one with whom I felt no kinship. All traces of the John Griffin I had been were wiped from existence.
>
> Even the senses underwent a change so profound it filled me with distress....
>
> The completeness of this transformation appalled me. It was unlike anything I had imagined. I became two men, the observing one and the one who panicked, who felt negroid even into the depths of his entrails. (pp.15-16)

This data suggests that alterations of an individual's facial appearance which do not involve immediate physiological feedback have the potential to evoke fairly substantial changes in self-perception. This provides some further support for the prediction that a mask may be able to transform its wearer's self-perception. However, as in the previous section, the strongest evidence for this effect (from Partridge [1990] and Griffin [1961]) occurs in a context in which the individual is directly looking at their transformed appearance in a mirror. Again, therefore, there is the

question of how far these findings would generalise to a more everyday context.

6.1.4 Clothes

A third body of psychological research that relates to the potential transformational effect of wearing a mask is research into the psychological effects of wearing clothes. This is a phenomenon which a number of the theorists discussed in chapter two (e.g. Eliade, 1964; Osbourne, 1971) have closely associated with masking. Osbourne, for instance, says that the transformation experienced by an individual wearing a mask is like the transformation experienced by a judge when he puts on his wig, a policeman his uniform, or a soldier his gas mask and rifle. Like masking, clothing involves the covering of the physical form with an 'artificial' object in a way that does not invoke direct physiological feedback.

Unlike the wearing of a mask, however, clothing covers the body rather than the face and covers a greater area of the individual's physical form. With respect to the first, and perhaps most obvious, of these differences, there seems no reason to suggest that something placed over the body is likely to have a qualitatively different impact from something placed over the face. Indeed, given that the latter may be a more concentrated focal point for psychological expression and communication, it would seem possible that facial coverings will have a greater psychological effect than bodily ones. With respect to the second difference, the greater area of body covered by clothes might mean that it would have a greater effect than the mask, but this would be a quantitative difference rather than a qualitative one.

There is, however, a third difference between the wearing of a mask and the wearing of clothes. This is that an individual is much more likely to be aware of the appearance of the clothes that she is wearing. She can look down at her trousers or she might catch sight of the colour of her sleeves, in a way that many individuals wearing a mask will not be able to do. Hence, if it is shown that clothes do affect how an individual feels, it may be, again, that this can only be related to situations in which an individual is aware of the appearance of their mask. In situations in which an individual is wearing a mask but is not focused on its appearance, then this might be quite different to the wearing of particular clothes.

Clear evidence for the transformational effects of wearing particular clothes --- at least for some individuals --- comes from a number of questionnaire studies. The first of these, by Ryan (1953) asked 1480 young students a number of questions regarding their relationship to clothing. Of her sample, 641 said that their mood was influenced by the colour, texture, or type of costume they were wearing, compared with 330 who said it wasn't. Moreover, the mood-transforming effect of clothing was related to the specifics of the clothing worn: e.g. 'Dressy clothes, dark clothes, and black were mentioned as contributing to feeling sophisticated, or lady-like' (p.20); bright colours, full skirts and taffetas tended to contribute to a feeling of gaiety; whilst for some of the women, dull or unsaturated colours led to feelings of depression or sadness. Quotes from the young womens' questionnaires confirm the finding that the direction of 'causation' is very much from clothes to mood: e.g. 'Bright colours <u>give me</u> a definite lift' (p.20), 'Pink and feminine things <u>make me</u> feel young and sweet' (p.21), 'My white net strapless formal <u>makes me</u> feel like a princess' (p.21) (underline added).

More modest results were found by Miller, Jasper and Hill (1991), who looked at the effect of Halloween costumes on individuals' sense of identity and role. The authors found that some of their respondents felt they had a new identity with their costume on (women = 37%, men = 41%), though a larger proportion did not feel that they had a new identity (women = 63%, men = 59%). However, when asked whether they felt that they could play a different role at Halloween with no costume on, 68.7% said 'no' compared with 31.3% who said 'yes'. Overall, this suggests that, whilst the costumes may have transformed the identity of only a minority of the respondents, a majority felt that the costumes contributed a necessary element to the practice of role-play.

A third study by Kwon (1994) looked at the relationship between individuals' feelings towards their clothes and various areas of competency in their lives. Kwon found that, 'positive feelings towards one's clothes enhances self-perception of one's emotion, sociability, and occupational competency, and negative feelings towards one's clothes tends to reduce self-perceptions of these attributes' (p.134). Unfortunately, because her results are correlational, there is the possibility that when individuals feel competent, they feel good about their clothes. Hence, this study shows only a link between overall feeling and feeling towards clothes.

There are also studies which show that clothes can affect an individual's behaviour. The first of these is the study by Johnson and Downing (1979), reported in chapter three, which showed that wearing a nurse's outfit --- under conditions of anonymity --- led to the expression of more pro-social behaviour than the wearing of a Ku Klux Klan like uniform. Also, Frank and Gilovich (1988) found that professional football and ice hockey teams who wore black uniforms --- a colour they argued was associated with 'evil and death' --- had higher records of aggressive behaviour that those teams who wore non-black uniforms. Although this is a correlational finding, they went on to show that teams which switched from non-black to black uniforms, then went on to behave in a more aggressive manner.

With respect to the effects of clothing on how an individual feels, there may, again, be a question of individual differences. Kwon found a significantly greater relationship between clothing and sense of competency for women as opposed to men. Miller et al (1991), on the other hand, found a trend towards the obverse direction: men were more likely than women to believe that their costume gave them a new identity.

6.1.5 Transformations of the Face Which Do Directly Involve Physiological Feedback

A final set of data which might have the potential to throw some light on the transformational effects of wearing a mask is both the most fully researched and also the most difficult to link to masking. This is the literature on the 'facial feedback effect'. Here, there are over thirty systematic, carefully designed and carefully controlled studies which have shown that physiological changes in facial appearance --- such as smiling (e.g. Strack, Martin and Stepper, 1988) or frowning (e.g. Zajonc, Murphy and Inglehart, 1989) --- can lead to significant changes in an individual's mood. Detailed criticisms of this research has been made (e.g. Tourangeau and Ellsworth, 1979; Winton, 1986) but recent reviews (e.g. Adelman and Zajonc, 1989; Cappella, 1993; McIntosh, 1996) have concluded that there is substantial evidence in support of both the weak version of the facial feedback hypothesis (that facial expressions can modulate subjective experiences), and the strong version (that facial expressions can initiate subjective experiences).

However, because these studies involve facial changes which bring about direct physiological feedback, it is

very difficult to make any clear inferences from the facial feedback literature to the possible psychological effects of wearing a mask. Specifically, in the facial feedback literature, changes in facial appearance are entirely confounded with physiological changes, such that it is difficult to conclude anything meaningful about the effects of the former alone. For this reason, a detailed review of the facial feedback literature will not be covered in this thesis. However, specific explanations for this process will be discussed in the following section, which looks at possible explanations for the transformative effect of wearing a mask.

6.1.6 Summary

In summary, then, there is little direct empirical evidence regarding the transformational effect of wearing a mask. However, the empirical evidence from related fields provides strong support for the possibility that changes in an individual's 'facial' appearance, through the wearing of a mask, will transform that individual's self-perception. There is also some evidence to suggest that the wearing of a mask-like facial covering will transform an individual's affective state and their behaviour.

What also emerges from this review is that this effect is likely to be highly dependent on both situational and personal variables. Whilst the empirical evidence suggests that a transformation in self-perception can come about when an individual is aware of their transformed appearance, there is no empirical evidence to suggest that this will also occur in non-appearance-aware conditions. Furthermore, it would seem that there are a number of individual difference variables which may mediate between transformations in appearance and transformation in sense of self.

6.2 TRANSFORMATION AND SELF-PERCEPTION

How, then, might the wearing of a mask bring about this transformation? From the review in chapter two, it would seem that the most frequently advocated explanation (see section 2.2.1) is the following: When an individual wears a mask, their perception of their 'facial' appearance changes. This, then, changes how they perceive their psychological characteristics. This argument is similar to the self-attribution hypothesis that Laird (1984) puts forward to account for the 'facial feedback' effect.

6.2.1 Self-attribution and Facial Feedback

Laird's (1984) argument is based on Bem's (1972) theory of self-perception. Self-perception theory was originally developed as an alternative to cognitive dissonance theory (Festinger, 1957), and proposes the following:

> Individuals come to 'know' their own attitudes, emotions, and other internal states partially by inferring them from observations of their own overt behaviour and/or the circumstances in which the behaviour occurs. Thus, to the extent that internal cues are weak, ambiguous, or uninterpretable, the individual is functionally in the same position as an outside observer, an observer who must necessarily rely upon those same external cues to infer the individual's inner state. (Bem, 1972, p.2)

In recent years, self-perception theory has appeared increasingly inadequate to account for attitude change under conditions of forced compliance (e.g. Fazio and Cooper, 1983). However, as Fazio (1987) concludes in his detailed review, self-perception theory is still 'supported by much empirical evidence that is beyond the domain of dissonance theory' (p.130). This includes attitude-modifications based on pro-attitudinal advocacy (e.g., Kiesler, Nisbett and Zanna, 1969), the foot-in-the-door phenomenon (Freedman and Fraser, 1966) and pain perception (e.g., Bandler, Madras and Bem 1968).

Laird (1974) argues that the facial feedback effect occurs because the individual perceives their subjective state on the basis of their facial 'behaviour'. He writes: 'It is as if the subjects had said to themselves, "I am frowning (or smiling), and I don't have any non-emotional reasons for frowning, so I must be angry' (p.484). As Izard (1990) notes, however, Laird does not make it entirely clear how he sees this awareness of one's facial behaviour as coming about: i.e. whether it comes about through a physiological awareness of one's face, or whether it comes about because the individual, at a more cognitive level, considers how her 'face' might appear to another. Izard suggests that Laird is probably referring to both of these processes, and certainly the design of the Kellerman and Laird (1982) study, which examines the psychological effects of spectacle-wearing, suggests that Laird does not see this awareness as arising only through physiological channels.

Kellerman and Laird (1982) conclude from their study the following:

> It appears that to some extent, we redefine ourselves each time we attend to our attributes, using whatever information is most salient at the moment. This study demonstrates that among the sources of this information is our appearance.... a seemingly innocuous change in our appearance can change what we feel about ourselves. (p.312)

However, this conclusion is somewhat premature. Whilst the findings of the Kellerman and Laird (1982) and Wood (1986) studies can not be accounted for by a more physiological account of the facial feedback effect (see Izard, 1990), there is the possibility that these findings may have been due to a reactance effect or demand characteristics (see section 6.1.2). Another means of accounting for these findings is that the various facial coverings or pieces of clothing may simply have acted as cues which directed the wearer's attention towards particular self-perceptions or affective states. That is, participants in Kellerman and Laird's 'spectacle' condition may have rated their performance as superior, not because they saw themselves as spectacled and therefore more intelligent, but because they were simply reminded of intellectualism or hard-work by the spectacle-cue in the mirror. Similarly, with respect to the Ryan (1953) study, it may have been that the young women felt more feminine in pink clothes simply because they were surrounded by the colour pink, which reminded them of feelings of femininity or sweetness.

Such an account of Kellerman and Laird's (1982) findings can be tentatively rejected on the grounds that it was only the participants who responded to self-produced cues that changed their self-perception. Had participants been responding to non-self cues in the mirror, one would have expected participants more responsive to externally-produced cues to experience the greatest transformation in self-concept. However, because Wood (1986) and other experimenters do not take individual difference measures, nor do they control the experimental condition with a condition in which the cues are present but not being worn, it is not necessarily possible to conclude that these findings come about as the result of a self-attribution process.

Furthermore, in extending self-perception theory to facial appearance --- as opposed to facial expressions --- it should be noted that Laird goes beyond the original bounds of self-perception theory. This is because he is no longer talking about the effects of facial behaviours,

but the effects of facial characteristics. Kellerman and Laird (1982) justify this on the grounds that the latter are only a 'slightly different kind of information from which we might infer our attributes' (p.297). Kwon (1994) interprets self-perception theory in a similar way, writing that it 'suggests that any variable, such as appearance or clothing, that affects perceptions of others may also affect perceptions of self' (p.131). However, this is something of a mis-representation of Bem's original position, since the whole project of self-perception theory was to develop a behavioural account of attitudinal change. Unless one retains a strictly behaviourist perspective, however, there does not seem to be any good reason to distinguish between self-attributions on the basis of behaviour, and self-attributions on the basis of physical characteristics.

6.2.2 Facial-feedback and Mask-feedback

There would seem to be, therefore, some tentative empirical grounds for accepting Kellerman and Laird's (1982) hypothesis that changes in an individual's appearance can change the kinds of self-attributions that they make. And if, as Kwon (1994) suggests, any variable which affects perceptions of others may also affect perceptions of self, then there would be some grounds for suggesting that the wearing of a mask can also affect the kinds of self-attributions that an individual makes. However, there is a crucial difference between spectacles, beards, clothes, etc. and masks, in that the former group has been shown to 'affect perceptions of others' (see Terry and Krantz [1993], and Kellerman and Laird [1982] for reviews), whilst there is currently no evidence that masks do the same. It may be, for instance, that an individual wearing a mask is simply perceived as a face-less, character-less individual, rather than someone who has the attributes of the mask that they are wearing.

If this were the case, then, in terms of self-attribution theory, an individual might still perceives themselves as more character-less or identity-less if their face was hidden behind a mask --- as was found with some of the participants in the chapter four study. However, if observers do not perceive a masked individual as more like the character represented in the mask, then there would be no grounds for predicting that an individual will see themselves as more like their masked-character as a consequence of a self-attribution process. Indeed, if the reason why physical appearance transforms self-perceptions is wholly due to the self-attribution process

outlined by Kellerman and Laird (1982), and if masks do not transform the way that others are perceived in the way that spectacles, etc. have been shown to, then it may be that the findings discussed in sections 6.1.2 to 6.1.4 have actually very little relevance to the question of the mask's transformative effect. It would seem, then, that this question of whether masks affect other-attributions is one that needs to be addressed with some urgency (see chapter eight).

6.2.3 Situational Variables

Even if it is shown that the wearing of a mask affects other-perception, and that Laird (1984) and Kwon (1994) are correct to suggest that we may sometimes see ourselves as we see others, there are a number of situational variables that may mediate the extent to which a mask-wearer perceives her-self as the character represented in her mask.

First, there is the question of how aware an individual is of her 'facial' appearance. Kellerman and Laird (1982) write that we redefine ourselves each time we attend to our attributes; similarly, Fazio (1987) states that, 'There is much evidence to indicate that salience and vividness are important in attribution processes' (p.137). Hence, it may be that a mask will only transform its wearer when that wearer is directly aware of her transformed appearance. If, on the other hand, she is wearing a mask but focused on something altogether different, it may be that the wearing of a mask will have very little transformative effect.

Whether or not an individual is aware of her masked appearance is likely to be dependent on a number of factors. Some of these factors may be situational. For instance, an individual is more likely to be aware of her masked 'face' is she can see it in a mirror (as was the case in the Kellerman and Laird [1982] and Wood [1986] studies, and also for Partridge [1993] and Griffin [1961]). Other cues which increase public self-awareness may also increase the mask-wearer's awareness of her masked appearance (see section 3.2.2.2): for instance, being observed by a group. A mask-wearer may also be more aware of how she looks if she has spent a long time looking at her mask before she puts it on.

The effect of situational cues on public self-awareness is of particular interest, because, as the previous study has shown, the wearing of a mask in itself may reduce a wearer's awareness of her public self. This means that,

contrary to Honigman's (1977) prediction, there may be something of a negative correlation between transformative effects and disinhibition effects. If, for instance, an individual feels completely anonymous behind a mask, then she may not care about how she presents herself; but this reduced concern with her self-presentation may then draw her attention away from her 'facial' appearance. If, on the other hand, a mask-wearing individual feels highly identifiable and self-conscious behind a mask, then she may be less inclined to behave in an inhibited manner, but her greater attention to how she looks may mean that she will experience a greater transformational 'pull' by the mask's physical appearance.

In discussing situational factors which may affect an individual's awareness of how they look, it may also be important to reiterate the distinction made in section 2.2 between transformation as a loss of self, and transformation as a becoming the character represented in the mask. This is because an individual may be aware that their face is no longer their 'face' without necessarily being aware of the appearance of this new 'face'. Indeed, whilst factors like public self-awareness are likely to determine the extent to which the latter process occurs, the factors that determine the former process may be very different. For instance, pressure of the mask upon the face, small eye-holes, difficulty with breathing may all remind the mask-wearer that her face is no longer her 'face', even though she is not particularly aware of what her masked 'face' now looks like. Hence, under certain circumstances, there is the possibility that a mask-wearer will feel less like her-self and more like an anonymous or face-less being, even if she does not feel more like the character represented in the mask.

6.2.4 Individual Difference Variables

Along with situational variables, there are also individual difference variables which are likely to mediate between the wearing of a mask and any possible self-perceptual inferences.

The first of these, as discussed in section 6.1.2, is that of individuals who are responsive to self-produced cues, versus individuals who are responsive to situationally-produced cues. Laird (e.g. Duncan and Laird, 1977) has consistently argued that not all individuals are equally responsive to a self-perceptual facial feedback effect. Rather, he distinguishes between those individuals who rely primarily on self-produced

cues to define their subjective state (e.g. a man who decides he is happy because he is smiling), and those who rely primarily on situationally-produced cues to define their subjective state (e.g. a man who decides he is happy because he is at a party) (Laird and Crosby, 1974, p.46).

Laird and his colleagues have conducted several studies which support the validity of this distinction. Laird, Alibozak, Davainis, Deignan, Fontanella, Hong, Levy and Pacheco (1994), for instance, found that only individuals responsive to self-produced cues were more likely to experience affective changes as a result of facial mimicry. It should be noted, however, that not all findings corroborate the findings of Laird. Rutledge and Hupka (1985), for instance, found 'small and large feedback effects with both self- and situation-oriented subjects across the level of emotion and stimuli' (p.235).

Kellerman and Laird (1982) argue that wearing spectacles 'seems quite clearly to fit' (p.301) into the definition of self-produced cues, on the basis that, 'all aspects of an individual's appearance are parts of his or her distinctive manifestation of whatever situation he or she may be in' (p.302). On this basis, masks would also be included under the definition of a self-produced cue, and the prediction would be that individuals more responsive to self-produced cues would experience a greater degree of transformation when wearing a mask.

A second individual difference that may be of some relevance to the process of self-perception when wearing a mask is that of public self-consciousness. As Buss (1985) writes: 'Individual differences in public self-consciousness play a role in the psychological impact of appearance' (p.130). The reason for this may be that individuals high in public self-consciousness are more likely to be aware of any changes in their physical appearance, and consequently those changes are likely to have a greater psychological impact. Such a hypothesis was supported in a study by Solomon and Schopler (1982), which found that participants' public self-consciousness scores correlated significantly with the extent to which their clothing had an effect on their mood. Because these findings are correlational, however, they can not be used to show that levels of public self-consciousness increase appearance-feedback effects. Nevertheless, they do suggest that it would be worth exploring in more detail the relationship between facial feedback and public self-consciousness.

6.3 SUMMARY

On the basis of this review, the following general hypotheses can be proposed:

1. The wearing of a mask, under conditions in which an individual is aware of their 'facial' appearance, will lead to a transformation in the direction represented by the mask.

2. The wearing of a mask, under conditions in which an individual is aware that their face is no longer their 'face', will lead to a transformation away from the usual 'self'.

In addition, there are five hypotheses which are derived from the more specific discussion of self-attribution theory. These are as follows:

3. The wearing of a mask will transform how that mask-wearer is perceived, such that observers will tend towards perceiving her in terms of the psychological characteristics represented in her mask.

4. The wearing of a mask, under conditions in which an individual is aware of their 'facial' appearance, will lead to a transformation in the direction represented by the mask through a self-attributional process.

5. The wearing of a mask, under conditions in which an individual is aware that their face is no longer their 'face', will lead to a transformation away from the usual 'self' through a self-attributional process.

6. Individuals reliant on self-produced cues will experience a greater degree of transformation when wearing a mask than individuals reliant on situationally-produced cues.

7. Individuals high in public self-consciousness will experience a greater degree of transformation when wearing a mask than individuals low in public self-consciousness.

CHAPTER SEVEN: AN EXPERIMENTAL INVESTIGATION INTO THE TRANSFORMATIVE EFFECT OF WEARING A MASK

7.1 INTRODUCTION

7.1.1 Aims

The main aim of this study was to empirically test the first hypothesis stated in section 6.3.: that the wearing of a mask, under conditions in which an individual is aware of their 'facial' appearance, will bring about a transformation in the direction represented by the mask. It also aimed to test the second hypothesis: that an individual wearing a mask will feel less like their usual selves; and hypotheses six and seven, that the extent to which an individual is transformed when wearing a mask will be dependent on their levels of public self awareness and reliance on self-produced cues. As part of this examination, this study also aimed to conduct a preliminary exploration of hypotheses four and five: that the mask will transform its wearer through a self-attributional process. Finally, as with the study in chapter four, this study aimed to develop a more grounded insight into the experience of wearing a mask by using a series of open-ended qualitative measures.

7.1.2 Methodological Issues

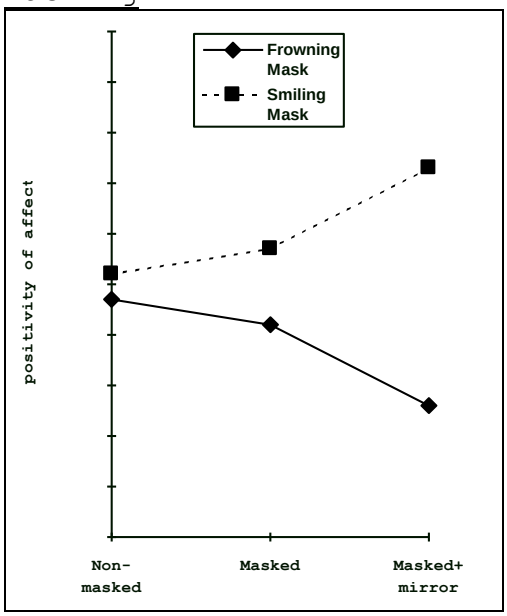
The study in chapter four has shown that the combined use of qualitative and quantitative measures as part of an experimental, laboratory within-participants design can be an effective means of investigating the effects of wearing a mask. Furthermore, it would seem from this study that substantial knowledge of a valid and reliable kind can be obtained without the use of deception. The basic design of this study, therefore, shares many of the same features as the study in chapter four. However, from the methodological lessons of that previous study, and from the different questions being asked in this study, the design was modified in a number of significant ways.

First, this study was not looking at the effects of identifiability or inhibition. Hence, there was no need to invoke the presence of observers through the use of a video camera. Rather, what this study was interested in looking at, particularly with respect to hypothesis one,

was the effect of manipulating a mask-wearer's awareness of her masked appearance. Hence, this study was developed to compare the effects of three different levels of masking. The first level was a non-masked control in which participants were simply asked to look at a mask briefly, and then to put it out of their field of vision. At the second level, participants were asked to look at a mask briefly, and then to put it on. It was thought that at this level participants would have some awareness of their masked appearance, and therefore, if hypothesis one was correct, would experience a somewhat greater degree of transformation in the direction represented by the mask than participants in the non-masked condition. The third level was similar to the second level, except that at this level participants were asked to look at their masked face in the mirror, such that they would be highly aware of their masked appearance. At this level, it was predicted that participants would experience the greatest degree of transformation in the direction represented by the mask.

If only these three conditions were used, however, it would not be possible to distinguish between a transformation in the direction represented by the mask, and more general effects that the wearing of a mask --- or seeing oneself wearing a mask --- might have. Hence, to see whether or not participants actually felt transformed by the appearance of the mask, two masks with very different 'facial' appearances were used. These masks were a smiling mask and a frowning mask. If a mask's appearance did transform its wearer, it was predicted that there would be a significant interaction effect between the type of mask worn and the individual's awareness of her masked-appearance. Hypothetically, this interaction was expected to look something like graph 7.1, with little difference between feelings of affect when the masks were just looked at briefly, a somewhat greater difference when the masks were just worn, and the greatest difference when the participants were seeing themselves wearing the mask.

Graph 7.1
Predicted relationship between type of mask and level of masking



In terms of internal validity, one potential weakness of the study in chapter four was the possible confounding effects of experimenter expectancy. For the present study, therefore, there was a desire to try and minimise this artefact as much as possible. To do this, the study was designed such that there was as little contact between the researcher and the participants as possible --- without entirely removing the experimenter from the experimental environment. In contrast to the study in chapter four, therefore, participants in the present study were provided with a single list of instructions (which included response sheets) and asked to work through these. Hence, once the study began, there was no contact between the researcher and the participants.

In terms of the collection of qualitative data and its analysis, there was also a desire to try and reduce the involvement of the researcher --- along with his expectations and assumptions. For this reasons, rather than obtaining the qualitative data through post-experimental interviews, this time the data was collected by asking participants simply to write down what it was that they were experiencing in the different conditions. Participants were also asked to do this in short 'I feel...' statements rather than as extended prose. The advantage of this was that the coding could then be done by others as well as the researcher, as such short responses would be quicker to code, and could be done by someone who had little knowledge of the area under

investigation. It also meant that the coder could be kept blind to the aims of the study. To take the researcher further out of the picture, it was also decided to code and analyse the qualitative data from a data-driven, rather than a theory-driven, perspective.

Another difference between this study and the study in chapter four was that participants in the present study were not asked to undertake any task (such as talking about student financial matters), but simply to reflect on what it was like in the different conditions. This was for three main reasons.

First, given that each participant was taking part in six different conditions, the amount of time that each condition took needed to be as brief as possible. Hence, any task which took more than a few minutes (and the task of completing the 'I feel...' statements took several minutes in itself) would have made the study impractically long.

Second, in contrast to the study in chapter four, this study was not focused on behavioural changes, and therefore did not need to assess how participants performed in a particular task. Rather, it was interested in participants' phenomenological experiencing, and, in this respect, simply asking participants how they felt seemed the most direct way of acquiring this information.

Third, as discussed in section 4.1.2.6, there was a general desire to avoid as much deception in these experiments as possible. Therefore, if the goal was to see whether participants felt differently when looking at or relating to the masks in different ways, it seemed that the most honest and straightforward approach would simply be to ask them to try out the different combinations and report back on what they felt.

Related to this, a final difference between this and the initial study is that the amount of time that participants could spend in each of the conditions was not pre-determined. This was for two reasons. First, given that some participants in the chapter four study had said that they felt uncomfortable wearing the masks, it seemed important to ensure that the participants could take off the masks relatively quickly if they wished to. Second, to ensure that the participants took exactly the same amount of time in each condition would have required the researcher to have more contact with the participants (i.e. telling them when to start and finish each trial). Given that there was a desire to keep the researcher out

of the way as much as possible, it was decided just to let the participants try out the different conditions in their own time.

7.2 METHOD

7.2.1 Design

This study used a 2 × 3 within-subjects design to examine the hypotheses outlined in 7.1.1. The first independent variable was type of mask: 'smiling' mask vs. 'frowning' mask. The second independent variable was the 'level' of masking, with three levels: non-masked, masked, and masked+mirror.

To assess the effect of these manipulations, the study incorporated features from both quantitative and qualitative research methodologies. Quantitatively, the dependent measure was the degree to which participants felt 'positive' in each of the conditions. It was predicted that there would be an interaction between mask-type and level of masking, such that the smiling mask would lead to substantially more positive feelings than the frowning mask when participants could actually see themselves wearing the masks, and somewhat more positive feelings when the participants were wearing the masks but could not see themselves doing so. It was also predicted that there would be a correlation between how much individuals experienced a transformation in the direction represented by the masks, and their reliance on self-produced cues and levels of public self-consciousness.

Qualitatively, open-ended measures were used to triangulate the quantitative findings, and also to gain a deeper insight into the processes by which any transformative effect might come about. Qualitative measures were also used in the hope that they might provide some answers to the question of whether or not individuals who wore masks and knew that their face was not their 'face' would feel less like themselves. Open-ended qualitative measures were also used as a means of gaining a more grounded understanding of the experience of wearing a mask.

7.2.2 Participants

Sixty individuals took part in the study, all of whom were Open University undergraduate psychology students attending summer school at Sussex University (a year

after the participants in the chapter four study). Fifty of these participants were women (83.3%) and ten (16.7%) were men. The age of the participants ranged from 19 to 58, with a mean of 34.7. The participants' occupations varied broadly, with a predominance of 'white collar' professionals: e.g. librarian, nurses, teachers, policemen.

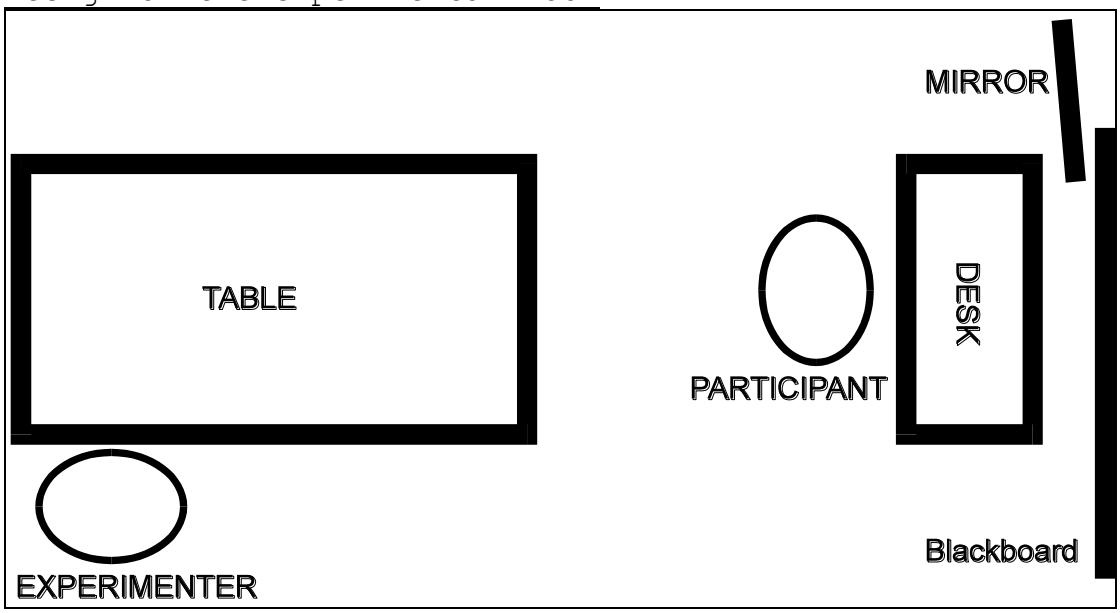
To recruit participants for the study, a brief talk about the experiment was given to the Open University psychology undergraduates, by the researcher, during their initial induction session (see appendix 7a). This was similar to the talk given for the study in chapter four, except that students were told that the experiment involved 'trying out a couple of masks in a couple of different ways, and then describing how it feels'. Also, to reduce the possible volunteer biases described in section 4.4.5, participants were not told that the study was looking at the 'effects' of wearing a mask. The main points were reiterated again on the sign-up sheet.

However, in contrast to the previous study, the students were also informed that the researcher would be 'around' on the two afternoons when the Open University students had their own participant pool; and that, if any of the participants were interested in taking part in the study then, they would be very welcome to do so. Possibly as a consequence of this --- knowing that they could take part in the study without having to sign themselves up --- a smaller number of students actually wrote their names down in the specific slots than for the previous study (around twenty participants). Hence, around two-thirds of the participants in this study were Open University students who had been asked if they wanted to participate in 'the mask study' whilst waiting in the participant pool, and had agreed to.

7.2.3 Apparatus and Materials

The study took part in the same classroom as previously. The participants sat at a table at one end of the room, facing a table and a blackboard behind it. Slightly to the left of the participant was a figure-length mirror, out of their direct line of vision, and positioned such that they needed to move their chair to see their face fully in it.

DIAGRAM 7.1
Design of the experimental room



The researcher sat throughout the study at a table behind the participant, and was involved in private studies. At no time was he observing the participants once they began to work through the instructions (a feature of the experiment that participants were informed of in the informed consent form).

As part of the experimental set-up, a 'smiling mask' and a 'frowning mask' were also placed on the floor, just to the left of the participants' desk (see illustration 7.1). These masks were bought from a theatrical/'fancy dress' shop, and were both approximately 18cm high by 17cm wide, made of a fairly thin, almost transparent plastic. The two masks had the appearance of the 'archetypal' smiling/frowning masks frequently used as the symbol for drama. The 'smiling' mask was silver in colour, with a wide-smiling mouth, and 'laugh-lines' around the cheeks. By comparison, the 'frowning' mask was gold in colour, with a down-turned mouth and eyebrows in the shape of a frown.

ILLUSTRATION 7.1
Masks used for Study

A single instructions/response booklet was used for this study (see appendix 7b), and was placed on the table in front of the participants when they entered the laboratory. The booklet consisted of four parts.

The first page was an informed consent form, which was considered essential given that some participants in the chapter four study had experienced the wearing of the mask as unpleasant. This form particularly emphasised the participants' right to withdraw from the study at any point or to decline from responding to particular instructions/questions, and that such choices would not in any way adversely effect the study as a whole. If participants signed this informed consent form (and no prospective participants declined to sign it) then these forms (with the participant's signature on) were kept separate from their other responses.

The second page gave participants the following instructions for taking part in the study:

> In a moment, you will be asked to try out six different conditions. For each condition, you will be asked to describe how you feel, by completing a maximum of six sentences that begin, 'I feel.....': e.g. 'I feel... quite normal', 'I feel... sleepy'. Please limit your descriptions to how you feel, rather than what you think, what you see, or what you are doing, etc. However, if you feel 'nothing', 'the same as usual', or if you feel

> exactly the same in each of the conditions, then it is quite legitimate to respond in this way.
>
> Please try to be as honest as possible in your descriptions of how you feel --- even if you think that this will go against the experimenter's hypotheses or 'ruin' the study. There are no 'right' or 'wrong' answers to these conditions, only your own experiences; but the more accurate you can be about how you feel, the more insight it will provide into what actually happens --- or doesn't happen --- when people wear masks.

Finally, participants were asked in the booklet to try not to describe their feelings in terms relative to the other conditions but in absolute terms (so that they could be coded independently). They were also reminded that they could choose to withdraw from the study at any point. If they had no questions they were then asked to proceed.

In the third part of the booklet, participants were given six different sets of instructions for each of the six different conditions.

Each of the sets of instructions first asked participants to face forward, and then to look at the gold/silver mask until they were familiar with the facial features. For the non-masked conditions, the participants were then instructed to put the mask back on the table. In the masked and masked+mirror conditions, participants were instructed to put the gold/silver mask over their face. In the masked+mirror conditions, they were then asked to look at themselves in the mirror. For all conditions, participants were then instructed to describe how they felt, and were presented with six unfinished sentence beginning with 'I feel....' In the masked and masked+mirror conditions, they were then instructed to take the mask off.

At the end of the six specific sets of instructions, participants were then asked to go back to each of the previous conditions, and to put a number from one to eleven in a box to the left of that condition, indicating the <u>overall</u> extent to which they felt positive or negative in that condition (one equalling extremely negative, and eleven equalling extremely positive). This one to eleven scale was used rather than a one to ten scale (as in chapter four), so that participants had a midpoint of six which they could score if they had experienced very little affect in either direction when

wearing the masks. It was also used so that the scale would be consistent with that used in the final part of the response booklet.

This final part of the booklet presented participants with nineteen different statements, and asked them to indicate on eleven point Likert-type scales, the extent to which the statements were like them (one equalling 'not at all like me', eleven equalling 'a lot like me'). These nineteen statements were intended to measure three different individual difference variables.

Items one, four, six, nine, eleven, fifteen and nineteen were the public self-consciousness items taken from the revised self-consciousness scale (Scheier and Carver, 1985). Total public self-consciousness scores consisted of the tallied totals of all items. This inventory was identical to that reported in chapter four, except that a one to eleven scale was used instead of Scheier and Carver's one to four scale. This was done so that the PBSC items could be comparable with the items from the self-cued/situationally-cued scale.

Items three, eight, twelve, thirteen, seventeen and eighteen were attempts to measure the extent to which participants were reliant on self-produced cues or situation-produced cues. These items were adapted from Rutledge and Hupka's (1985) shortened versions of the questions originally used by Laird and Crosby (1974). All six statements were the same as used by Rutledge and Hupka, but a 'not at all like me' to 'a lot like me' scale was used rather than a scale based on frequency, so that the cue-orientated items could be comparable with the public self-consciousness items. One item was also reversed (seventeen), such that the scale was fully counterbalanced, with three items in the direction of self-cued, and three in the direction of situationally-cued. Finally, Laird and Crosby's original eleven point scale was retained rather than Rutledge and Hupka's five-point version. Assuming inter-item reliability, total cue-orientation would be calculated by adding together the scores on items three, twelve, and eighteen, and the reversed scores on items eight, thirteen and seventeen. Higher scores would indicate a greater reliance on self-produced cues, and lower scores indicate a greater reliance on situationally-produced cues.

Items two, five, seven, ten, fourteen, and sixteen were not directly related to the present study, but were incorporated to explore one of the individual difference dimensions that had seemed to emerge in the chapter four

study. In that study, it seemed that some individuals were particularly concerned with how their face appeared. Hence, these items were a preliminary attempt to construct a 'facial self-consciousness' scale, with items two, five and sixteen reversed in the final tallying. The aim was to see whether items which, in terms of face validity, all seemed to assess 'facial self-consciousness', would also show a degree of inter-item reliability.

Finally, the questionnaire asked participants for their age, gender and occupation.

To counterbalance for order effects there were six different versions of the booklet, each of which were identical except that the six tasks were sequenced in different ways according to a Latin square design. This means that each of the different conditions was at a particular point in the order an equal number of times, and that each directly followed and preceded each other an equal number of times. However, as with all Latin square designs, the order effects in this study are not entirely counterbalanced, as not all of the 6! --- or 720 --- possible sequences could be run.

7.2.4 Procedure

Participants were welcomed into the room, seated in front of the table (such that they could not see themselves in the mirror), and then told that they should follow the self-explanatory instructions in the booklet. The booklet was placed on the table in such a way that the researcher was blind to which of the six sequences the participant had been assigned to. The participants were told that the researcher would be present in the event that they had any questions or ran into any difficulties, but that he would be involved in his own work, and would not be surreptitiously observing them (this promise was meticulously implemented).

The participants were also told that, when they were instructed to put the mask back down on the table, they should make sure that it was outside of their direct line of vision. This was to ensure that the non-masked condition would be matched with the masked condition, in which the participants could not see the appearance of their mask.

Participants were then asked to work their way through the experimental instructions and questionnaires until they informed the experimenter that they had finished.

At this point, the experimenter then debriefed the participants along the lines suggested by Mills (1976). This primarily involved ascertaining the extent to which participants were aware of the experimental hypotheses through a series of 'laddered' questions, informing participants about the exact nature of the study (which participants were asked to keep to themselves until all studies had been run), and ensuring that participants were not left with any unresolved emotional difficulties as a consequence of participating in the study.

7.2.5 Methods of Analysis

7.2.5.1 Quantitative

Frequency charts showed a relatively normal distribution of scores across the six treatment conditions. The quantitative self-report data was therefore analysed using a mixed model analysis of variance on version seven of SPSS. Two within-participants factors were used: type of mask (smiling versus frowning) and level of masking (non-masked versus masked vs. masked+mirror). One between-participant factor was also introduced into the analysis: sequence (sequence one vs. sequence two... vs. sequence six).

Mauchly's test did not find a significant lack of sphericity for either level of masking (χ^2 [2] = 4.30, p = .12) or for the level of masking × type of mask interaction (χ^2 [2] = 3.56, $\underline{p}$ = .17). All tests were therefore conducted with sphericity assumed (see print-out of SPSS analyses in appendix 7e).

With respect to the reliability of the individual difference measures, the alpha coefficient of the public self-consciousness scale was again high, at .86.

However, the reliability of the self-cued/situationally-cued scale was unacceptably low, with an alpha coefficient of just .40. Even with removing the two items with the lowest item-total correlation, this coefficient could only be raised to .54. For this reason, it was decided to treat each of these items as separate measures.

The six items which attempted to measure 'facial self-consciousness' showed an alpha coefficient of .54. However, if item fourteen was removed ('I enjoy looking at my face in the mirror), this coefficient went up to .64. If items seven and ten were then also removed ('I much prefer talking to people face to face than over the

telephone') and ('I'm someone who uses non-verbal facial expressions a lot when I communicate'), this alpha coefficient rose to .80. This was between the three remaining items 'I sometimes get self-conscious about my facial expressions', 'I sometimes worry about my face behaving in ways that I can't control, like blushing or twitching', and 'I sometimes find myself covering my face when I interact with others.' No further analyses were conducted with the scores from these items.

To see whether the measures of public self-consciousness and self-cued/situationally-cued correlated with participants' feelings of transformation, two 'transformation' scores were calculated for each of the participants. These measured the extent to which participants moved in the direction represented by the mask in the masked and the masked+mirror conditions, as compared with the non-masked conditions. The calculation for the 'masked transformation' score was therefore as follows: (SW - SN) - (FW - FN). The calculation for the 'masked+mirror transformation' score was as follows: (SM - SN) - (FM - FN) (S = smiling mask, F = frowning mask; N = non-masked, W = masked, M = masked+mirror).

Participants were coded as hypothesis-aware if they stated an awareness of any of the experimental hypotheses.

7.2.5.2 Qualitative

To analyse the qualitative data from the sixty participants, all 913 written responses were first typed out on to a word processor (without details of which condition they came from), and then read through by the researcher a number of times to get a 'feel' for the data. The responses from just the first ten participants were then focused on in detail (see appendix 7c), and from this a number of categories were developed by the researcher which seemed to represent this subset of responses (as suggested by Boyatzis [1998]). All the responses were then read through again, and those responses which seemed to fall into these initial categories were 'marked off'. New categories were then developed for the remaining data, until a near-exhaustive set of around forty categories was developed.

Such a large number of categories felt somewhat unwieldy. However, it was noted that there were a number of polarities between the categories that emerged: for instance, happy and sad, comfortable and uncomfortable, anxious and calm. It was decided, therefore, to reduce the number of categories by bringing together these polar

opposites, and coding them as '+' or '-' poles of a single dimension. This would then allow a single, combined count to be calculated from both of these scores by deducting the '-' frequency count from the '+' frequency count. To maintain consistency, opposite poles were also created for those categories in which an opposite category had not emerged. The only exception to this was where a category clearly did not have an opposite (e.g. miscellaneous), or where it seemed useful to differentiate between different opposites on a singular dimension (e.g. 'not self: other', 'not self: detached'). As a result of this, around twenty-five category-dimensions remained. All of the data was then formally coded by the researcher into each of these dimensions. Those categories in which ten or less responses had been coded were then removed, leaving just twenty bipolar categories. These were as follows:

1. Usualness of feelings
2. Usualness of identity
   2-(a): Not the same person as I usually am
   2-(b): A different person from who I usually am
   2-(c): Expressing a different part of myself
   2-(d): Detached from who I usually am
3. Hiddenness
4. Deceptiveness
5. Comfortableness (non-physical)
6. Comfortableness (physical)
7. Positive affect
8. Empowerment
9. Silliness
10. Mischieviousness
11. Amusement
12. Liking
13. Anxiety
14. Threat or fear
15. Threatening or frightening
16. Interest or alertness
17. Confusion
18. Attractiveness
19. Miscellaneous physical feelings
20. Uncodable responses

A complete list of the bi-polar categories, with each of the poles, and examples of what might be included under these poles, can be seen in appendix 7d. This list was then given to two independent judges --- who knew that the study was interested in masks but were blind to the specific hypotheses or design of the study --- and the judges were asked to code each of the 913 responses into one, and only one, of the 43 poles. If the judges felt

that the response could go into more than one pole they were asked to choose the one that seemed most appropriate. Judges were blind at all times to which of the conditions each of the responses had come from. The judges agreed on 77.2 percent of the 913 codings, which was considered a respectable level of reliability. On this basis, the two judges were asked to meet, and decide on poles for those responses where there was not agreement. Following this meeting, poles were agreed for all responses.

7.3 RESULTS

7.3.1 Quantitative

Table 7.1 shows the results of the analysis of variance (print out of the SPSS analyses can be seen in appendix 7e). As predicted, there was a significant interaction between type of mask and level of masking, and significant main effects for both type of mask and level of masking. There was no main effect for sequence, nor for interactions between sequence and the two within-participant factors.

TABLE 7.1
Tests of between- and within-participant effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Between-participants					
Sequence	4.83	5	0.97	0.27	.93
Error (seq.)	193.17	54	3.58		
Within-participants					
Type of mask	295.21	1	295.21	51.10	<.000001
Type of mask × Sequence	59.49	5	11.90	2.06	.085
Error (type)	311.97	54	5.78		
Level of masking	256.74	2	128.37	20.77	<.000001
Level of masking × Sequence	48.09	10	4.81	0.78	.65
Error (level)	667.50	108	6.18		
Type of mask × Level of masking	43.17	2	21.59	5.43	.0057
Type of mask × Level of masking × Sequence	51.93	10	5.19	1.31	.24
Error (type × level)	429.23	108	3.97		

Simple within-participant contrasts were carried out, using the first, non-masked level as the reference category (see full details in appendix 7e). For the type of mask × level of masking interaction, there was a significant interaction effect between the masked+mirror level and the non-masked level ($F[1, 54] = 4.17$, $p = .046$), but not between the masked level and the non-masked level ($F[1, 54] = .90$, $p = .35$). This can be seen in graph 7.2. For the level of masking main effect, there was a significant difference between both the masked+mirror level and the non-masked level ($F[1, 54] = 30.83$, $p < .000001$), and the masked level and the non-masked level ($F[1, 54] = 23.38$, $p = .000011$). Means for all six conditions and mean totals can be seen in table 7.2.

GRAPH 7.2
Mean scores on positivity of affect

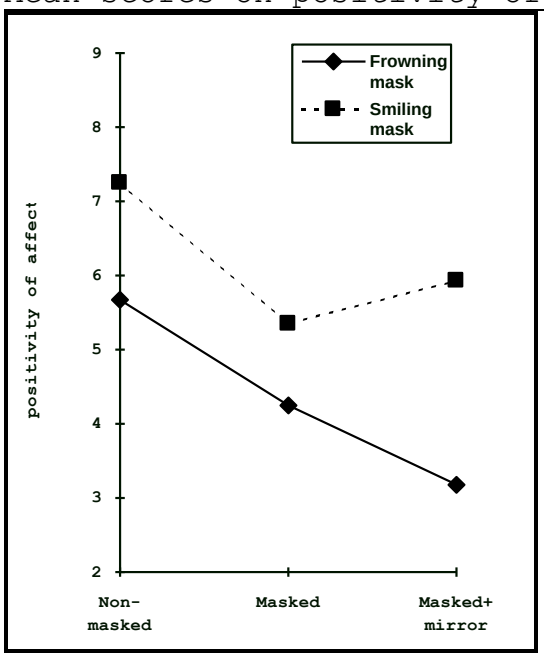


TABLE 7.2
Mean scores on positivity of affect and mean totals

	Non-masked	Masked	Masked +Mirror	Mean total
	M	M	M	M
Frowning Mask	5.67	4.25	3.18	4.37
Smiling Mask	7.25	5.35	5.93	6.18
Mean total	6.46	4.8	4.56	5.27

Nine participants were coded as being hypothesis-aware. All these participants stated an awareness that the study might have something to do with whether people felt like the mask that they are wearing. None of the participants stated an awareness that the study might be interested in the relationship between responses to wearing a mask and individual differences. Graph 7.3 presents the responses of participants coded 'hypothesis-aware' and 'hypothesis-unaware'. As can be seen from this, the small number of hypothesis-aware participants were less likely to respond in the predicted direction than non-aware participants.

GRAPH 7.3
Mean scores on positivity of affect for hypothesis-aware, and hypothesis-unaware participants

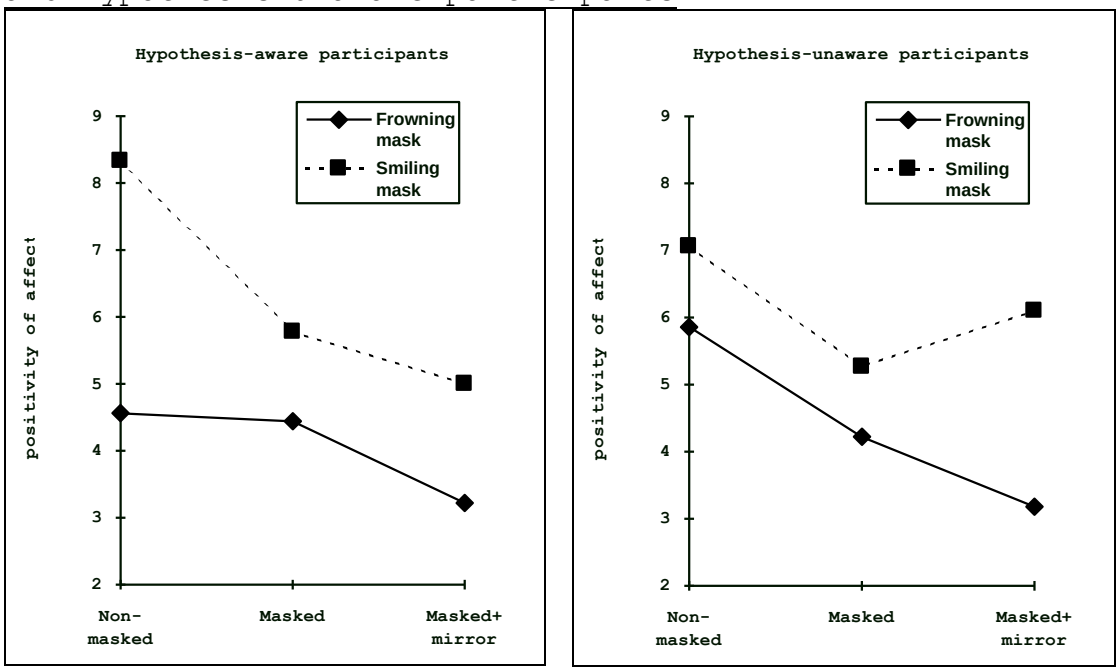


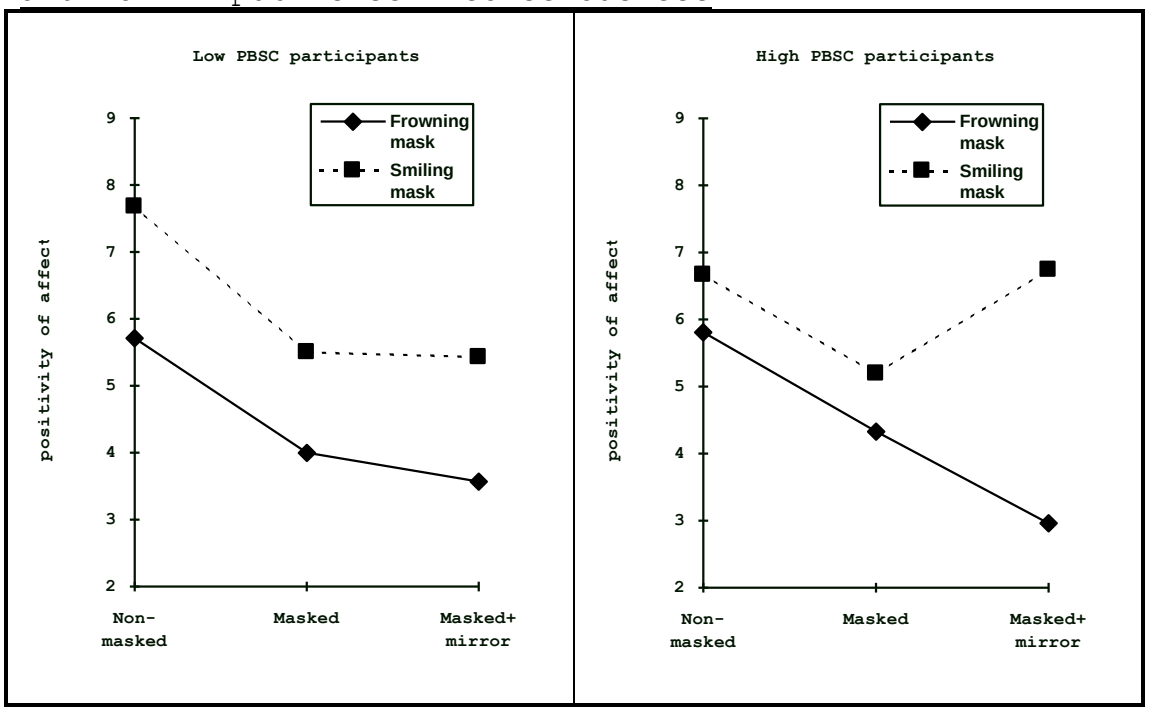
Table 7.3 shows the correlations between the individual difference measures and the 'wearing-transformation' and 'mirror-transformation' scores. As can be seen, the hypothesis that individuals high in public self-consciousness will experience a greater transformation when wearing a mask was not supported. However, because there was a correlation of .17 between public self-consciousness scores and masked+mirror transformation, it was decided to conduct a post hoc comparison between the responses of high public self-consciousness participants (those who scored higher than the sample median of 52) and participants low in public self-consciousness (those who scored lower than the sample median of 52) (participants on the median score were randomly distributed). The results can be seen in graph 7.3, and show that the predicted interaction effect was notably larger for participants high in public self-consciousness.

TABLE 7.3
Pearson correlations between transformation scores and individual difference measures

scales/items	masked transformation scores		masked+mirror transformation scores	
	r	p	r	p
Public self-consciousness	.00	.99	.17	.21
emotion like sensation (item 3, self-)	-.28	.03	-.11	.41
emotion changes with situation (item 8, sitn-)	-.10	.46	-.08	.54
no reason for feelings (item 12, self-)	-.15	.27	-.05	.71
emotions like judgement (item 13, sitn-)	-.13	.32	.04	.74
feel same as others (item 17, sitn-)	.30	.02	.13	.31
others misjudge my feelings (item 18, self-)	-.00	.99	.03	.84

Note: Details in brackets are number of item on questionnaire, and whether high scores are taken to indicate self-cued or situationally-cued disposition

GRAPH 7.4
Mean Scores on positivity of affect for participants high and low in public self-consciousness



As can be seen from table 7.3, there is also no evidence to support the prediction that self-cued individuals tend to experience a greater degree of transformation when wearing a mask as compared with individuals reliant on situational cues. In fact, the only significant results emerging from this data contradict this hypothesis. Individuals who experienced a greater degree of transformation in the masked condition tended to be less likely to feel that their 'experience of emotion is immediate and strong like a sensation', and more likely to feel that they often feel the same as those around them.

7.3.2 Qualitative

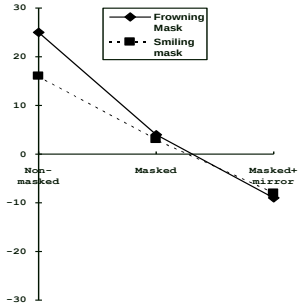
In total, 121 responses were given in the frowning mask (non-masked) condition, 127 in the smiling mask (non-masked) condition, 155 in the frowning mask (masked) condition, 152 in the smiling mask (masked) condition, 176 in the frowning mask (masked+mirror) condition, and 182 in the smiling mask (masked+mirror) condition.

Graph 7.5 shows the combined frequency counts where the number of responses at the '-' pole of a dimension have been deducted from the number of responses at the '+' pole of the dimension. Both '-', '+' and total frequency counts can be seen in appendix 7f.

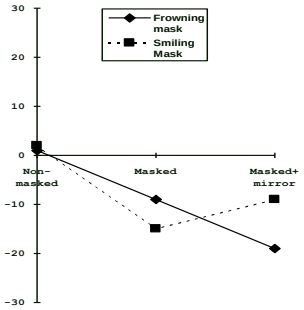
GRAPH 7.5

Combined frequency counts for qualitative responses

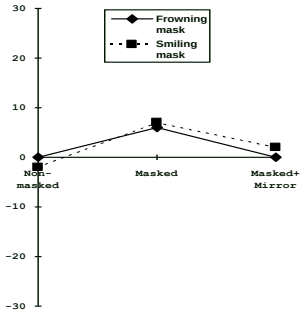
1. Usualness of feelings



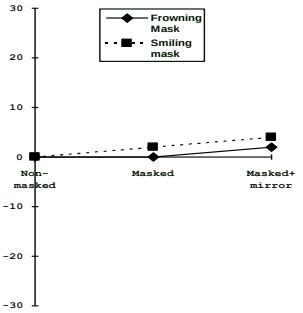
2. Usualness of identity



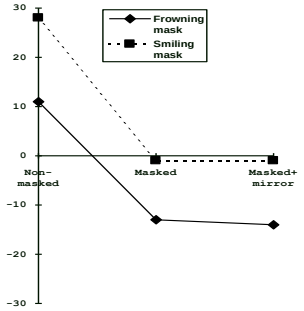
3. Hiddenness



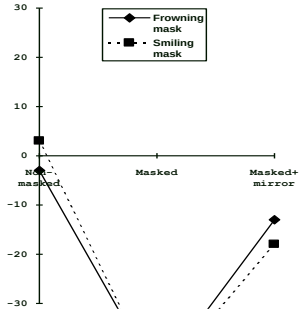
4. Deceptiveness



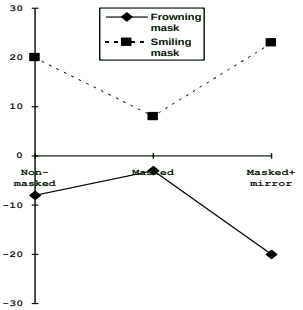
5. Comfortableness



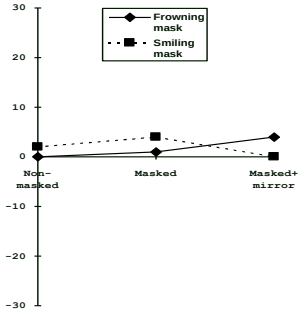
6. Comfortableness (physical)



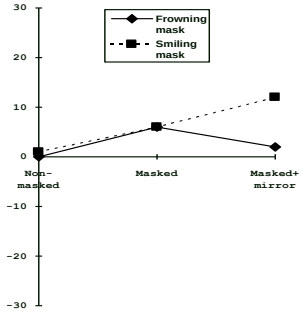
7. Positive affect



8. Empowerment



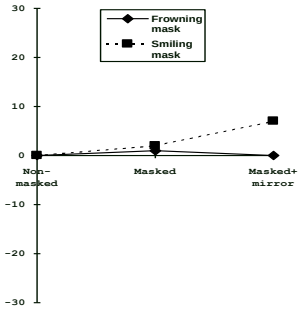
9. Silliness

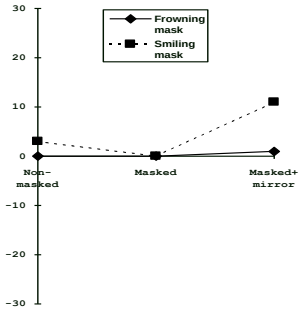


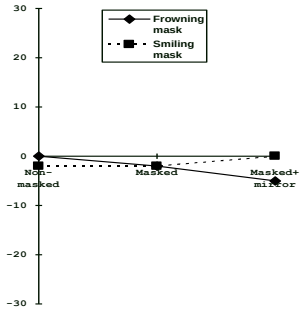
10. Mischievousness

11. Amusement

12. Liking



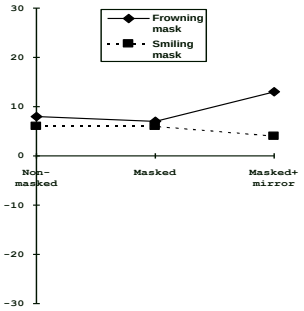


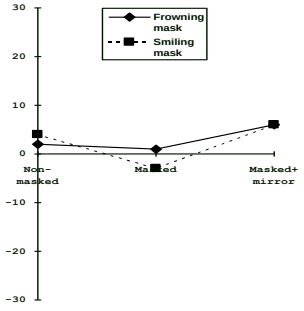


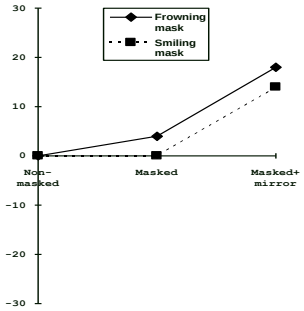
13. Anxiety

14. Threat or Fear

15. Threatening or Frightening



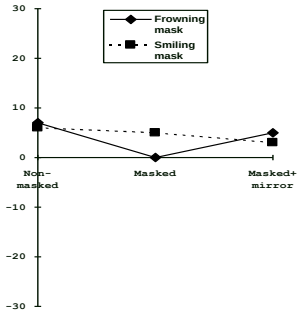


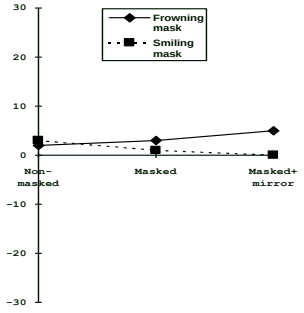


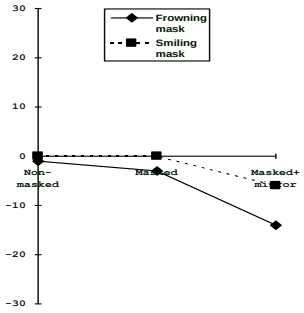
16. Interest or alertness

17. Confusion

18. Attractiveness

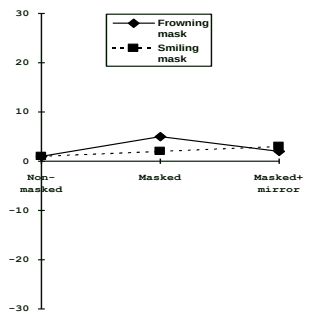


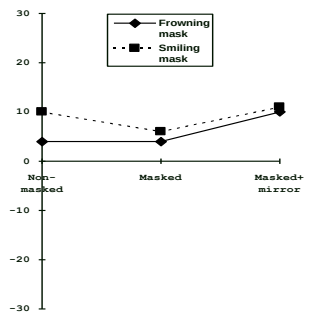




19. Misc. physical feelings

20. Misc.





7.4 DISCUSSION

7.4.1 Hypothesis one: The wearing of a mask, under conditions in which an individual is aware of their 'facial' appearance, will lead to a transformation in the direction represented by the mask

The results of this study provide mixed support for the above hypothesis. On the one hand, there is evidence that when an individual is acutely aware of their masked 'face', they will experience a transformation in the direction represented by the mask. This is most clearly shown in the significant interaction between the type of mask worn and the level of masking, when comparing the non-masked level with the masked+mirror level. Analysis of the responses from hypothesis-aware and hypothesis-unaware participants strongly suggest that this is not a consequence of demand characteristics. Furthermore, frequency counts of the qualitative responses coded under dimension seven (positive affect) triangulate well with the above findings. Participants who saw themselves wearing the smiling mask had a combined count of 24 more responses coded under 'happy...' and 19 fewer responses coded under 'sad...' than participants who saw themselves wearing the frowning mask. This compares with 18 more and 10 fewer responses in the non-masked condition, respectively.

Along with transformations in affect, frequency counts of the qualitative responses coded under category 2-(b) also suggest that the wearing of a mask --- under conditions in which an individual is acutely aware of their masked-appearance --- may increase the extent to which an individual's sense of self is transformed. In the masked+mirror condition, fourteen responses were coded under 'I feel... "a different person from who I usually am"', as compared with none in the non-masked condition. Responses coded under this category include: 'I feel like

a different person' (41: frowning mask), 'I feel taken over (slightly)' (48: frowning mask), 'I feel as if I'm someone else' (54: frowning mask) (numbers before colon are participant number). It should be noted, however, that this is only around four percent of the total responses in the masked+mirror conditions.

One other set of qualitative data tentatively suggests that the wearing of a mask, under high appearance-awareness conditions, led to a transformation of 'self' in the direction represented by the mask. Thirty-two responses from the masked+mirror conditions were coded under category 15+ ('Threatening or Frightening') as opposed to none in the non-masked conditions. This includes such responses as: 'I feel fearsome' (19: smiling mask), 'I feel sinister' (33: smiling mask), and 'I feel "evil" malevolent' (39: frowning mask). Assuming that these are not terms that the participants would normally use to describe themselves, this finding again suggests that participants in the masked+mirror condition may have been more likely to take on a different sense of identity.

On the other hand, it would seem that when an individual is wearing a mask but is not made acutely aware of their masked appearance, then transformation in the direction represented by the mask does not take place. Indeed, contrary to predictions, the data from the quantitative measures shows that participants in the masked conditions rated less of an increase in feelings of positivity from the frowning mask to the smiling mask condition ($\underline{M}$ = 1.1), as compared with participants in the non-masked conditions ($\underline{M}$ = 1.58). Findings contrary to expectations are even more prominent in the qualitative data. In the masked conditions, participants wearing the smiling mask gave just six more responses coded under 'happy...' and just five fewer responses coded under 'sad...' than when they were wearing the frowning mask. As stated above, this compares with 18 more and 10 fewer responses in the non-masked condition, respectively.

There is one finding, however, which suggests that the wearing of a mask, per se, may contribute to the adoption of an alternate sense of self. From the masked trials, seven responses were coded under category 2-(b) ('I feel... "a different person from who I usually am"') as compared with no responses from the control trials. This includes such responses as: 'I feel like a spy' (23: smiling mask), 'I feel like a child' (29: smiling mask), 'I feel like someone else is sitting here writing this' (30: smiling mask). It should be noted, however, that

this is only around two percent of the total responses from the masked conditions.

How, then, can this apparent anomaly in the findings be explained? Based on the data, the most likely explanation is that it requires a masked individual to be more than just 'aware' of their 'facial' appearance for them to be transformed in the direction represented by the mask. Rather, it would seem that the mask-wearer needs to be actively focused on their appearance for this change to be brought about.

Such an explanation, however, raises some important questions about the situational generalisability of these findings. If an individual needs to be actively focused on their masked appearance for that mask to have any effect, then the number of situations in which an individual will feel transformed by their mask may actually be fairly small. Certainly, as the present results show, this transformative effect will occur if an individual is directly looking at their masked 'face' in a mirror, but what about other situations, such as being masked in a crowd, or being masked on stage? If there is no transformative effect just from the wearing of a mask, per se, then it seems possible that the transformative effect in these kinds of situations will be fairly small.

On the other hand, it may be that individuals in these situations would be much more focused on their 'facial' appearance than participants in this study's masked conditions, who were not being looked at, were looking 'out' at a blackboard, and were primarily focusing on their 'internal' feelings. The only way to really answer this question is through further empirical research, which could extend the present research to look at the transformative effect of wearing a mask in various, more 'real life' contexts: for instance, in a group/crowd, or in front of an audience.

Another question which this piece of research only begins to answer is the question of why a masked individual might experience a transformation of affect and self-concept under conditions in which they are focused on their 'facial' appearance. One possibility, as discussed in section 6.2, is that a self-attribution process occurs whereby the mask-wearer comes to see themselves as the mask character. One participant (50) expressed this very directly, stating that when seeing herself wearing the smiling mask she felt, 'a bit evil, the hooked nose makes me like the Artful Dodger'.

However, this is by no means the only possible explanation. As discussed in section 6.2.2, one alternative explanation for why individuals feel more like their 'face' when they see that 'face' in a mirror is that the 'face' is simply acting as an external cue: either priming the individual towards particular affective states, or eliciting in the observer a sympathetic response (for instance, feeling happier because of looking at a happy face). In terms of the present study, then, the greater transformative effect in the masked+mirror condition may have simply arisen because participants in this condition had more opportunity to see the 'face' of the mask (in the mirror).

This interpretation is supported by the finding that the simple act of briefly looking at the masks, in the non-masked conditions, brought about a substantial transformation in the direction represented by the mask. This can be seen in the quantitative data, where there is a mean difference of 1.58 for ratings of positivity in the smiling and frowning non-masked conditions. It can also be seen in the qualitative responses coded under 7 (positive affect), where simply looking at the smiling mask brought about 20+ and 0- responses, compared with 0+ and 10- responses when participants were looking at the frowning mask. The qualitative responses coded under 5 (comfortableness) also suggest that simply looking at a mask can bring about a transformation in the mask's direction, with 31+ and 3- responses in the smiling, non-masked condition, and 17+ and 6- responses in the frowning, non-masked condition. These findings can only really be explained in terms of the mask acting as a cue; certainly, they can not be explained in terms of a self-attribution process.

However, it seems unlikely that the greater transformative effect in the masked+mirror condition can be explained solely in terms of cue-effects. This is because, whilst there would be good reason to assume --- and, indeed, good evidence to show --- that looking at a happy 'face' can make you feel happier/more comfortable and looking at a sad 'face' can make you feel sadder/less comfortable, it seems unlikely that looking at a happy or sad 'face' could make you feel less like your usual self (2-[b]). Indeed, if this were the case, one would expect at least some of the responses in the non-masked conditions to come under this category. The fact that none of them do, as compared with thirteen in the masked+mirror condition, suggests that some kind of transformation is occurring in the masked+mirror

condition which can not be attributed entirely to a visual cueing effect. Similarly, it is difficult to see how looking at a smiling or frowning mask could make you feel more threatening or frightening (15+). And, again, if it could, then one would expect at least some of the responses in the non-masked condition to be coded under this category, rather than none.

A third possible explanation for the greater transformative effect in the masked+mirror condition might be that participants' responses were not a consequence of seeing themselves as the masked character, but a consequence of seeing themselves with a different appearance. For instance, participants may have found it funny to see themselves 'wearing' a smiling face, or felt saddened to see 'themselves' looking ugly or harrowed. In other words, participants may not have identified with the masked-character, but simply responded to changes in their physical appearance. Such an interpretation is supported by the fact that twelve of the responses in the smiling, masked+mirror condition were coded under category 11+ (amusement), with only one response coded in this way in the frowning, masked+mirror condition, and only three responses when participants were looking at the smiling mask alone. Similarly, in the frowning masked+mirror condition, 14 responses were coded under category 18- (Ugly...), in contrast to half this number in the smiling masked+mirror condition, and just one where participants were looking at the frowning mask alone. Both these sets of responses suggest that participants did have particular affective responses to seeing themselves look in a particular way, and that these were in the direction of the character represented in the mask.

Again, however, such an interpretation can not readily explain the finding under categories 2-(b) and 15+, where participants seem to be describing a real transformation in their sense of self in the masked+mirror conditions. Possibly, one could account for the greater 15+ findings in terms of participants feeling angry about seeing themselves wearing a mask, but then one would expect an equal number of these responses in the masked conditions, where physical uncomfortableness responses (6-) were much more frequent. Alternatively, one might argue that when participants were describing themselves as more threatening, etc., they were only really describing how they were looking rather than how they felt at a more 'internal' level. However, this seems unlikely as participants were specifically asked to describe how they felt rather than what they looked like.

A fourth explanation for the findings is that suggested in section 2.2.2: 'transformations of the face (physiological)'. According to this line of reasoning, participants may have experienced a greater level of transformation in the masked+mirror condition because they imitated the 'facial' features of the mask they saw themselves wearing. Consequently, they did not become transformed because of the kind of self-perceptual process that Kellerman and Laird (1982) outline, but through the kinds of physiological facial feedback mechanisms that Izard (1990) describes. From the results of this study, there is no means of assessing the extent to which this contributed to the transformational process. However, it seems more likely that this would account for changes in affect than the changes in sense of self (e.g. 2-[b]). If an individual smiled or frowned in imitation of the mask, then there is certainly evidence that this could make them feel happier or sadder (e.g. Strack, Martin and Stepper, 1988), but it seems less likely that this would bring about feelings of being a different person.

With respect to the other explanations of the masks' transformative effect presented in chapter two, neither 'observer feedback' (section 2.2.5) or disinhibition (section 2.2.6) seem likely sources, given the non-interpersonal design of the study. The findings also do not support the '"motors" of the mask' theory (section 2.2.4), as if this was brought about the transformation, then one would expect approximately equal levels is the masked conditions. The other explanation, that of 'unconscious transformation' (section 2.2.3), also seems unlikely, as the seated participants were not given the opportunity to physically behave in ways that might emulate the mask. However, it is just possible that the participants in the masked+mirror condition started to move their head or neck in ways which felt appropriate to the masked character, and therefore experienced a greater degree of transformation.

Whilst it would seem, then, that the wearing of a mask, under conditions in which an individual is focused on their masked appearance, will bring about a transformation in the direction represented by that mask, it is not clear how this transformation comes about. From the qualitative data in this study, it would be tempting to conclude that it is probably a consequence of a number of different factors: certainly cue-effects, almost certainly some self-attribution effects (as this is the only explanation which can really account for the changes

in 'self'-perception), probably effects of seeing oneself with a particular appearance, and possibly some effects of physiological changes in the face.

In order to identify more precisely the role of the self-attribution process, however, it would seem essential to conduct further research. Most importantly, it would seem necessary to find a way of controlling for the cue-effects of looking at a mask --- perhaps by comparing a masked+mirror condition with a control condition in which participants were looking at the same mask but not wearing it. Possible physiological feedback effects could be controlled for by using masks which did not differ in features that could be physiologically imitated: for instance, two identical shaped masks, but one with a moustache and longer hair. 'Unconscious' tendencies to emulate the behaviour of the mask could be somewhat controlled for by giving participants tasks in which they would not be trying to behave as the mask-character.

Responses to seeing oneself in a mask are likely to be more difficult to control for, as it would seem impossible to create a situation in which an individual can see themselves in a mask, but in which there would be no possibility of them having a particular reaction to it. However, at a subjectively-experiencing level, participants should be able to distinguish between feeling like the mask as a consequence of identifying with it, and experiencing a particular feeling as a response to seeing themselves in a mask. Hence, if participants were asked a very direct questions like, 'To what extent did you feel like the person represented in the mask?' then this should 'filter out' some of those feelings which are more associated with amusement, sadness or other responses to seeing oneself in a mask. Such a question would also have the advantage of filtering out those feelings which are associated with looking at the mask, per se. Thus, a question like the above should provide a more internally valid measure of the extent to which an individual actually experiences herself as the character represented in their mask.

7.4.2 Hypothesis two: The wearing of a mask, under conditions in which an individual is aware that their face is no longer their 'face', will lead to a transformation away from the usual 'self'

Because the data from the quantitative measures looked at specific affects, it can not really be used to assess this hypothesis. However, there is some data from the qualitative responses which provide some support for this

hypothesis. From the responses coded under dimension one (usualness of feelings), it is clear that participants felt less like usual in the masked+mirror conditions and in the masked conditions than in the non-masked conditions. Combined differences between positive and negative counts in these three conditions were minus 17, seven, and 43 respectively. Whether it would be appropriate to use the term 'transformation' for this change, however, is questionable. As discussed in section 2.2, transformation refers to a change in the distinguishing attributes or characteristics of the mask-wearer, and simply feeling 'strange' (1: frowning, masked) or 'different from normal' (16: frowning, masked+mirror) would seem a little too vague and 'non-essential' to come under the definition of 'transformed'.

Evidence which does relate to thorough changes in the form of the mask-wearer, however, come from those responses coded under category 2-(a) (not the same person as I usually am), which indicate a specific loss in the sense of self. Whilst none of the responses from the non-masked conditions was coded under these categories, six responses from the masked conditions were coded under this category, and seven responses from the masked+mirror conditions were coded under this category. Examples of these responses are: 'I feel that I am not myself' (23: frowning, masked+mirror), 'I feel depersonalised' (42: frowning, masked), 'I feel faceless' (55: smiling, masked+mirror).

As with those responses coded under 2-(b), this is only around two percent of the total responses in the masked and masked+mirror conditions. However, what is interesting is that participants in the masked conditions were as likely to give responses coded under this pole as participants in the masked+mirror conditions. This is very much in line with the hypothesis that it is the participants' awareness that their face is no longer their 'face', rather than their awareness of their new 'face's' appearance, that will determine how much they feel unlike their usual selves. In the present study, participants in the masked conditions may not have been quite as aware as participants in the masked+mirror conditions that their face was no longer their 'face', but they should still have had considerable awareness of this fact. For instance, they would have been able to feel the mask on their face, and their vision would have been limited by the mask's eye-holes. Hence the fact that a small percentage of participants felt more depersonalised or faceless in this condition, even though they did not feel more like the mask that they were

wearing, suggests that the factors which determine how much an individual feels like themselves, and how much they feel like the character in the mask, may be somewhat independent.

As with the question of why participants felt more like the mask, there are several different ways of explaining why participants were less likely to feel like their usual selves when wearing the mask. It may have been due to a self-perceptual process, but it may also have been due to other factors: particularly the physical effect of the mask on the face. If, for instance, the individuals felt hotter than usual or found it more difficult to see, then they may have given responses like, 'I didn't feel like my usual self'. Also, participants may have simply described themselves as feeling less like themselves because the wearing of a mask is a less than usual activity. Having said that, the kinds of responses that were coded under 2-(a) suggested a transformation in self which was more than just physical: for instance, feeling 'depersonalised' or 'faceless'. This suggests that these responses may be more to do with a self-attribution process. But to explore this possibility more directly, it might be useful in subsequent studies to ask more direct questions, like 'To what extent do you feel like the person that you usually are?'

7.4.3 Hypothesis three: Individuals reliant on self-produced cues will experience a greater degree of transformation when wearing a mask than individuals reliant on situationally-produced cues

Unfortunately, the very poor inter-item reliability of the self-cued/situationally-cued scale makes it very difficult to say anything meaningful regarding this hypothesis. As with the measures of private self-awareness, it is worth noting that none of the authors who have developed or used these items report their inter-item reliability, and it may be that a more reliable self-report measure of self-/situationally-cued will need to be developed. On the basis of the individual items alone, however, what significant findings there are somewhat question the above hypothesis, and suggest that it may be individuals reliant on situationally-produced who are more responsive to wearing a mask cues. However, given that this significant effect occurred only in the masked conditions, and not in the masked-mirror conditions, where one might expect the mask to be a more prominent situational cue, it is very difficult to interpret the meaning of these correlations.

In subsequent studies, it might be worthwhile using a less self-report-based method of measuring the extent to which individuals are reliant on self- or situationally-based cues. It may be, for instance, that individuals' reliance on self- or situational-cues is only at the fringes of awareness, and therefore not something that will emerge on self-report items. In some studies, Laird has used more behavioural measures, such as scores on the Embedded Figures Test (e.g. Laird and Berglas, 1975). In subsequent studies, such an approach might prove a more reliable means of testing this hypothesis.

7.4.4 Hypothesis four: Individuals high in public self-consciousness will experience a greater degree of transformation when wearing a mask than individuals low in public self-consciousness

There are no significant findings to support this hypothesis, but the post hoc finding that the predicted interaction effect only occurred in participants high in public self-consciousness suggests that this might be an area which warrants further investigation. However, it should be noted that as this is a correlational finding, there could be any number of reasons why only participants high in PBSC showed the predicted interaction effect. One possibility, as suggested in 6.2.4, is that individuals high in PBSC may be more aware of changes in their public self appearance. However, another explanation might be that individuals high in PBSC find it easier to take on social roles, and therefore are more likely to take on the character of different masks.

Statistically, there is also the problem with a post hoc median split in that there is unlikely to be an even distribution of the between-participant factor (in this case, sequence) across the 'highs' and 'lows'. In the present study, for instance, six of the high PBSC participants were in sequence one and three were in sequence four, whilst three of the low PBSC participants were in sequence one and six in sequence four. This, clearly, has the possibility of biasing the results. In future studies, therefore, it would be imperative to divide the participants into 'highs' and 'lows' before randomly allocating them to the between-participant conditions, to ensure that the between-participant factors are equivalent across 'highs' and 'lows'.

7.4.5 Other Findings

With respect to the hypothesis that the mask reduces its wearer's feelings of identifiability, it is interesting to note that thirteen of the responses in the masked conditions, and three of the responses in the masked+mirror conditions, were coded under the category 13+ (hiddenness). This compares with none in the non-masked conditions. Whilst this is only three and one percent of the total responses for the masked and masked+mirror conditions, respectively, it is still quite substantial given that the participants were, 'objectively', no less identifiable when wearing the mask. That is, no-one was looking at them in the first place, and they were turned away from the researcher. This supports the argument, made in section 3.2.1, that it may be important to distinguish between experienced-identifiability and 'actual'-identifiability, and that the mask may reduce the former even if it does not reduce the latter.

The responses coded under category 2-(d) (detached or cut off from the person that I usually am) are also of some theoretical interest. None of the responses from the non-masked conditions were coded under this category, eleven from the masked conditions were, and seven from the masked+mirror conditions were. Examples of responses in this category are: 'I feel detached --- I look at my eyes' (8: smiling, masked+mirror), 'I feel still an observer' (30: frowning, masked+mirror), I feel like a "hidden watcher" (a bit)' (37: smiling, masked). These frequency counts could be taken as support for the hypothesis that the wearing of a mask brings about a transformation in which the wearer feels less like themselves. As discussed in section 2.2.2, however, there is something of a distinction between the hypothesis that the mask brings about a diachronic split between past and present self-concepts (e.g. Honigman 1977), and the hypothesis that the mask brings about a synchronic split between self-concept and behaviour or public self (e.g. Jennings, 1990). Responses categorised under 2-(d) seem to fall more clearly under the latter, in that participants are describing more of a 'detachment from self' than a 'loss of self'. In this respect, these findings lend some tentative support to the theory that the wearing of a mask creates a dramatic distance between the individual's sense of self and their public self or behaviours. In subsequent research, it would be interesting to explore this process further; again, perhaps, by simply asking direct questions like: 'To what extent do you feel "cut off" from your external

appearance?' or ''To what extent do you feel detached from your behaviour?'

With respect to the hypothesis that the mask facilitates the expression of aspects of the Self, there was only one response coded under category 2-(c) (expressing a different 'part' of myself). This was 'I feel like an alter ego has surfaced' (30: frowning, masked+mirror). With just one response coded in this way, it is very difficult to come to any conclusion regarding this effect, except to say that it does not appear to be a particularly prevalent one.

7.4.4 General Methodological Issues

As with the previous study, there has been a high degree of agreement between the quantitative and qualitative findings of this study, showing a strong degree of synchronic reliability. Diachronic reliability, again, is uncertain, though some of the findings in this study do seem to build on findings in the previous study: that the wearing of a mask does lead some individuals to feel less like themselves, less identifiable, and possibly more inhibited.

With respect to internal validity, as with the previous study, demand characteristics do not seem to have had much effect. Indeed, in the present study, they seem to have brought about a notable reactance effect. It also seems unlikely that experimenter expectancy affected the results, given the minimal contact between experimenter and participants, particularly whilst the participants were engaged in the various conditions.

As a consequence of only minimal contact between participant and experimenter, however, one possible source of bias may have been the fact that the amount of time participants spent in each condition was not standardised. It is not clear how this would have interacted with the various experimental conditions. However, in future studies it may be useful to ask participants to wear/look at the masks for a standardised, short, period of time, to see if this makes any difference to the degree of transformation.

Another question of internal validity is the extent to which the quantitative --- and indeed, the qualitative --- measures of 'positive' and 'negative' affect actually assessed how much individuals felt like the character they saw in the mask. It was assumed that the smiling mask would be associated with 'positiveness' and the

frowning mask with 'negativeness', but it would probably have been better to conduct a pilot survey to ensure that this was actually the case. Also, as much of the more recent mood research now shows (e.g. Warr, Barter and Brownbridge, 1983), positive and negative feelings are not two ends of a bipolar continuum but somewhat independent variables. Hence, to increase the internal validity of this study, it may have been better to have two independent measures of 'positive affect' and 'negative affect', or, even better, two independent measures of 'happiness' and 'sadness'.

With respect to internal validity, the use of blind, external coders has clearly been advantageous, as it reduces the likelihood that the more significant qualitative findings are a result of experimenter bias. A more open-coding procedure has also ensured that the categorised data reflects more accurately the way in which participants actually experienced the different conditions. The disadvantage of using such a 'bottom-up' coding process, however, is that it then becomes that much more difficult to interpret the findings in terms of the specific hypotheses that are being tested. Also, it means that a body of 'superfluous' findings may emerge which are difficult to interpret in terms of the specific hypothesis being tested.

Because shorter response units were used in this study, it was also more difficult to identify the exact process by which the various effects had come about. The absence of post-experimental interviews also meant that a respondent validation process did not take place, which might have been able to clarify how the participants came to feel in the way that they did.

Another question regarding the internal validity of this study was whether it was better to count the qualitative responses by text units (as in the present study) or by persons (as in the previous study). This is really very difficult to gauge, as counting by text units may overemphasise the experience of one or two persons, but may also convey something of the extent to which the participants had a particular experience. As has been done in this thesis, perhaps one of the best approaches is to use different means of counting in different studies and then see how well the findings triangulate. Alternatively, it might be best to use both types of measures in each study, so that the qualitative data can answer the question 'how many' as well as 'how much'.

A final point regarding internal validity is that the categories were dimensionalised in terms of face validity, rather than in terms of any more rigorous process. Hence, it may have been more valid to treat responses like 'anxious' and 'calm' as independent variables, rather than as two ends of a polarity that could be combined. On reflection, however, the dimensionalising of the categories did make the qualitative data much more manageable. Also, if one treated the '+' and '-' frequency counts independently (see appendix 7f), the conclusions that one would come to would not be dissimilar from those using a combined score.

With respect to validity, perhaps the most significant general methodological concern regarding the findings of this study is that of ecological validity. Not only was the study conducted in an experimental laboratory environment, but participants were primarily asked to do something that very few people wearing masks would actually do: reflect on what it is like to wear a mask. The consequence of this is probably that the experiences reported will be more exaggerated than they would otherwise be. This is for two reasons. First, participants will be more focused on the kinds of feelings that they may be experiencing. Second, participants will have some expectancy that they 'should' be feeling something, and therefore may be more inclined to report feeling that exist only on the fringes of awareness. Also, because of the within-participants design of the study, participants are likely to feel that they 'should' be feeling different things in the different conditions, and therefore may exaggerate the reported differences in feelings between the conditions.

But the key question is whether this effect will interact with the different conditions, such that the findings will not only be quantitatively different, but that they will be qualitatively different from those that would be found in another environment. This seems less likely, as is it difficult to see a reason --- apart from demand characteristics, which have been ruled out --- why the laboratory conditions in this study would bring about feelings that would not exist outside of it, albeit in a lesser form. Given, for instance, that participants in this study seemed to feel less like themselves when seeing themselves wearing a mask, it seems possible that this effect may be less noticeable if they saw themselves wearing a mask in a drama class or in preparation for a fancy-dress party. But, if the effect is present in the

former situation, there seems no good reason to conclude that it will be entirely absent in the latter.

Furthermore, it might be argued that the effects found in this study are less than what might be expected in a 'real world' environment, for two reasons. First, the paradigm used in this experiment is equivalent to what is termed in the facial feedback research a 'static facial pose paradigm' (as compared with a 'dynamic facial pose paradigm'). That is, the current study tested whether the wearing of a mask could initiate a subjective experience, as opposed to testing whether the wearing of a mask was able to modulate a subjective experience. From the facial feedback research, it is evident that the former is much more difficult to achieve than the latter (see, for instance, Rutledge et al, 1987). Given, then, that in most real world contexts the wearing of a mask will take place within a dynamic context --- i.e. an individual will not simply put on a mask and expect to feel something but will put on a mask as part of an on-going affective dynamic --- then it may be that there the effect will be substantially greater.

A final general point regarding the methodology of this study is one of ethics. It is a point of concern that a number of participants did report feeling uncomfortable when wearing a mask; and that the average ratings of affect, particularly when participants were seeing themselves wearing the frowning mask, was quite close to the 'extremely negative' end of the affect scale. At the same time, it was made very clear to participants that they had every right to choose not to continue with the study if they did not want to, and none of the participants opted to exercise this choice, nor to say that they regretted taking part in the study in the post-experimental inquiry. Of course, this may be because participants did not want to 'offend' the experimenter or to 'upset' the experiment, but to assume that participants were not able to take responsibility for their own activities would not seem to be a particularly ethical stance either.

In future studies, however, it would seem important to further emphasise to participants that they really can withdraw from the study, and that this is not in any way a problem to the experiment as a whole. Furthermore, with participants who said that they found the wearing of a mask uncomfortable or unpleasant, it might be useful to find out why they then did not choose to withdraw from the study. This would be a way of ensuring that

participants do feel during the study that they have the choice to opt out.

7.4.5 SUMMARY

To summarise, the findings from this study strongly indicate that the wearing of a mask can bring about a transformation in the direction that it represents. However, for this to happen, it would seem that the mask-wearer needs to be more than just aware of her appearance; rather, she needs to be directly focused on it. The findings from this study also provide some initial support for the hypothesis that this transformation can come about through a self-attribution process. However, the findings indicate that there may be a number of other reasons why individuals tend to feel like a mask that they see themselves wearing: cueing effects, and also the effects of seeing themselves with a particular appearance.

The findings from this study also suggest that some individuals will feel less like their usual selves when wearing a mask, and that the factors which bring about this effect differ from the factors which lead people to feel like the character represented in the mask.

However, with respect to individual difference, there is no evidence that individuals who are more reliant on self-produced cues experience a greater transformation when wearing a mask than individuals who are reliant on situationally-produced cues. There is some indication that individuals high in public self-consciousness experience a greater transformation when wearing a mask, but this is a finding that requires substantially greater exploration.

CHAPTER EIGHT: CHANGES IN OTHER-PERCEPTION AS A FUNCTION OF THE OTHER WEARING A MASK

8.1 INTRODUCTION

Having established that the mask has the potential to transform its wearer, this and the following chapter will now look in more detail at the question of whether this can occur through the kind of self-attribution process outlined by Laird (1974) and his colleagues. As argued in section 6.2.2, however, logically prior to the question of whether the self is perceived differently in a mask is the question of whether another is perceived differently in a mask. If this is the case, then the mask can be added to those entities --- such as dress style, neckties, spectacles (see Kellerman and Laird, 1982) --- which have the potential to affect the attributes ascribed to oneself. Hence, the aim of this study is to directly test the fourth hypothesis developed in chapter six:

The wearing of a mask will transform how that mask-wearer is perceived, such that observers will tend towards perceiving her in terms of the psychological characteristics represented in her mask.

8.2 METHOD

8.2.1 Design

The study used a between-participants design, with half the participants asked to rate pictures of an individual wearing a smiling mask, and half asked to rate identical pictures, except that the individual was wearing a frowning mask instead of a smiling mask. The dependent measure was ratings of how positive or negative the participants thought the feelings expressed by the masked-individual were[11]. It was hypothesised that

[11] As noted in the previous study, 'positive' and 'negative' affect do not seem to be two opposite poles on a single dimension, but somewhat different dimensions. However, a positive-negative polarity was used in the present study so that participants had only one scale to respond to.

participants would rate the expressed-feelings more positively in the smiling-mask condition as opposed to the frowning-mask condition.

8.2.2 Participants

Forty participants in total took part in the study, twenty in the smiling-mask condition and twenty in the frowning-mask condition. Participants were recruited by the researcher in various refreshment areas of the University of Sussex. Twenty-three of the participants were female (eleven in the frowning mask condition, twelve in the smiling mask condition), and seventeen of the participants were male (nine in the frowning mask condition, eight in the smiling mask condition). Twenty-nine of the participants were undergraduate students (fourteen in the frowning mask condition, fifteen in the smiling mask condition), and eleven were postgraduate students (six in the frowning mask condition, five in the smiling mask condition). The participants came from a range of arts and science schools across the University campus, such as the School of Biological Sciences, School of African and Asian Studies, and the School of Social Sciences.

8.2.3 Materials

The five-page questionnaire presented to the participants consisted of instructions, and eight photographs (smiling or frowning mask) with Likert-type scales underneath. Copies of both questionnaires can be seen in appendix 8a.

The masks used for this study were identical to the smiling and frowning masks used in the previous study. However, when an initial set of black and white photographs of the masks were made, it was noted that the gold mask appeared much darker than the silver mask. This was undesirable, as there was the possibility that 'brightness of mask' might serve to confound the experimental findings. Hence, both masks were painted in 'flesh tint' before being used to produce the final set of photographs, such that they would appear of equal brightness.

To create the two sets of photographs, a colleague of the researcher's was asked to create a number of different poses, with the instruction that the poses should vary somewhat along a scale of expressions of positive or negative affects. When the colleague had found a suitable pose, and the researcher felt that the pose was not overly 'unnatural', the colleague was asked to hold that

pose by keeping very still. She was then photographed in this pose twice, once wearing the smiling mask, and once wearing the frowning mask. As part of this process, it was ensured that the colleague was not aware which of the masks were over her face, such that she would not 'unconsciously' change her body posture in accord with the mask's expression. Also, in some cases the colleague wore the frowning mask first and the smiling mask second, and in others vice-versa, to ensure that any general postural changes over time would be balanced out.

Around twenty different pairs of photographs were taken. Once these were processed, each pair was examined in detail, and those where there was any noticeable degree of difference between the two images (e.g. where the eyes in one photograph could be seen better than in the other, or where the hands were higher in one than the other) were discarded. This left eight pairs of near-identical photographs, which were used for the experimental questionnaires.

The first page of the questionnaire contained instructions, and asked participants to 'try to estimate the extent to which you think the actor is expressing a positive or negative feeling in each of the images'. They were asked to do this by, 'circling a number from 1 to 11 on the scale underneath each image, where 1 = the expression of an extremely negative feeling, and 11 = the expression of an extremely positive feeling.' To provide a rationale for why the actor might be wearing a mask --- such that the participants would not immediately assume that it was a study of the effects of seeing a mask --- participants were told that the actors' face was being kept anonymous. To minimise the extent to which they focused on the mask's appearance, participants were also specifically instructed to base their judgements on the actor's postures and gestures.

Underneath each of the eight subsequent photographs was an eleven-point Likert-type scale, anchored at 'extremely negative' for one and 'extremely positive' for eleven.

8.2.4 Procedure

Prospective participants were approached and asked if they wanted to take part in a psychology study. If they agreed to participate, one of the questionnaires was randomly selected, and given to the participant, where they were sitting. Participants were told that the questionnaire was 'fairly self-explanatory' but if they had any questions they should ask the researcher. No

participants had any questions. The researcher then withdrew from close proximity to the participant to minimise possible experimenter-expectancy effects.

When the participant looked like she had completed the questionnaire (on average, this took about ten minutes), and confirmed that she or her had done so, details of undergraduate/graduate status and School were asked for. A laddered debriefing process was then conducted, whereby participants were then asked if they had thought at all about the aims of the study, and, if so, what they thought those aims might be. Once the extent of the participants' awareness of the experimental hypothesis had been ascertained, a more general discussion was entered into about the study, and the exact purpose of it was explained to the participants. This often involved showing participants the questionnaires with both sets of photographs. Finally, participants were thanked for their time, and asked, because of the nature of the research, not to talk to others around campus about the specific experimental hypothesis that was being tested. All participants agreed to this.

8.3 RESULTS

Frequency distribution charts of the dependent measures showed acceptably normal distributions on all measures. T-tests were therefore conducted on the participants' mean ratings across all eight photographs, as well as on each of the specific photographs. The t-tests showed that, on average, participants estimated the actor as expressing a significantly more positive feeling in the smiling mask condition as compared with the frowning mask condition (see table 8.1, full details of analyses are in appendix 8b). With respect to the specific pictures, significant differences in the predicted direction were found in four of the pictures: one, two, five, and six. With only one of the pictures did participants in the frowning-mask condition rate the expressed feeling as more positive than in the smiling-mask condition: seven.

From the post-experimental debriefing, no participants demonstrated an awareness of the experimental hypothesis.

TABLE 8.1
Mean ratings of positivity, standard deviations, t-values and p-values

	Smiling Mask		Frowning Mask			
Photographs	M	SD	M	SD	t(38)	P
Picture one	5.25	1.89	3.35	1.04	3.94	.00034
Picture two	8.35	2.11	6.90	2.22	2.12	.041
Picture three	5.80	1.40	5.55	1.93	0.47	.64
Picture four	6.80	2.44	6.35	2.28	0.60	.55
Picture five	6.40	2.39	4.30	2.30	2.83	.0074
Picture six	5.90	2.49	2.85	1.50	4.70	.000034
Picture seven	5.90	1.59	6.00	1.17	0.23	.82
Picture eight	6.00	2.22	5.45	2.65	0.71	.48
Mean total	6.30	0.74	5.09	0.69	5.32	.000005

8.4 DISCUSSION

8.4.1 Hypothesis one: The wearing of a mask will transform how that mask-wearer is perceived, such that observers will tend towards perceiving her in terms of the psychological characteristics represented in her mask

The findings from this study provide strong support for this hypothesis. The validity of this finding is strengthened by three further aspects of this study.

First, in contrast to previous studies on the effects of physical perceptions on psychological perceptions, participants in this study were specifically instructed not to include the experimental manipulation as one of the bases on which to judge the target individuals. Hence, even though participants were instructed to focus away from the masks, it seems that it still had a significant effect on how the participants perceived the mask-wearer.

Second, in looking at the mean scores for each of the individual photographs, the differences between the two conditions seems to be very much related to the relative prominence of the mask's facial expressions in each of the photographs. Due to some technical difficulties, the expression of the masks on the fourth and seventh photograph are somewhat difficult to see (see appendix 8a), and it is here that one finds two of the smallest differences between the two conditions. Indeed, the one condition where the mask's expression is most difficult to see (photograph seven) is also the one condition where the actor was rated as more positive in the frowning mask condition. In contrast, the greatest difference in ratings of affect between the two conditions is with photograph six, and this is the one photograph where there are no hand or arm gestures, simply the mask at a slight facial tilt. Again, this suggests that the more salient the 'facial' appearance of the mask, the greater its effect on how its wearer is perceived.

Third, many of the participants' responses in the post-experimental debriefing indicated that the mask did, indeed, affect how they perceived the mask-wearer. First, around half of the participants who were shown the two sets of photographs side-by-side after the study, even though fully aware of the experimental hypothesis, still said that they thought the feelings expressed in the 'smiling mask' photographs were more positive than those in the 'frowning mask' photographs. Indeed, many were quite struck --- and amused --- by the extent to which the mask changed how they perceived the actor's expressions. Second, in the post-experimental debriefing, around fifteen percent of the participants said that they found it difficult to focus just on the postures and gestures because it was so difficult not to be 'biased' by the mask's expression. Indeed, one participant went so far as to cover up the mask with her hand whilst she was completing the questionnaire so that it wouldn't affect her responses!

Furthermore, it would be difficult to explain this effect in terms of demand characteristics, as none of the participants expressed an awareness of the experimental hypothesis: i.e. that the study was interested in looking at the effect of the 'facial' expression of a mask on how others are perceived. The majority of participants thought that the study was something to do with perception of others as a consequence of the position of their hands, or as a consequence of their facial expression being hidden.

What this study does not entirely rule out, however, is the possibility that the difference in ratings between the two conditions was a consequence of the two different masks acting as cues or reminders of different feelings. For instance, participants looking at the photographs of the smiling mask may not have directly perceived the mask-wearer as being more positive. Rather, seeing the happy mask may have made them feel more positive, and then they may have 'projected' this feeling onto the mask-wearer. Whilst this explanation can not be ruled out, however, it seems unlikely. This is because, as discussed earlier, the ratings of the actor's expressions seems to be very specifically related to the relative prominence of the mask's expression in each photograph, as opposed to being a more global rating. If it were the case, for instance, that the participants simply felt happier seeing a happy face, then one might expect this effect to be spread out over the whole task, rather than in a very photograph-specific way. Furthermore, participants were very clearly asked to estimate the extent to which the actor was expressing positive or negative feeling. Even if, then, this estimation was affected by cueing effects, the fact remains that the way in which the mask-wearer was perceived was altered by their mask's expression.

Another possible criticism of this study is the fact that participants were asked to rate what an actor was 'deliberately' trying to express through different poses, rather than actual characteristics of 'real' people. In this respect, it might be argued that this study shows that the mask affected how participants decoded an artificial behavioural 'signal', but not that it affects how they really perceive individuals' characteristics in a real world situation. Given such a limitation, it would be interesting to develop this line of research using more 'everyday' examples. For instance, participants could be shown photographs of masked individuals at a party, in one condition wearing 'happy' masks, and in another 'sad' masks. The participants could then be asked to rate the party-goers on personality traits or affective states. However, given that the mask's expression did have a very clear effect on how the actor's postures and gestures were perceived, it seems unlikely that this effect would be entirely nullified in a 'real world' situation.

The findings from this study also raise the question of why it was that the participants' perception of the mask-wearer was affected by the mask's appearance. Rationally, there is no reason why the participants should have

partly based their judgement on the mask's appearance. Indeed, on a logical basis, they should have simply concluded that, 'I can not see the mask-wearer's face, so her "facial" expression can not tell me anything about what she is feeling.' Furthermore, in contrast to seeing someone wear spectacles or a beard, the effect of the mask's appearance can not be explained in terms of stereotyping, as the participants are unlikely to have pre-conceived ideas about what kind of people would wear smiling or frowning masks (though this might be an interesting idea to test empirically).

Two alternative explanations, however, may account for the mask's effect. The first is that some form of 'perceptual illusion' occurs, whereby the observer perceives the mask-wearer's 'face' as her actual face, and thereby makes attributions based on this facial appearance (e.g. Secord and Muthard, 1955). For example, even though the participants in the present study would have 'known' that the actor's smiling mask was just a mask, they may have still tended to perceive this smiling 'facial' appearance as the mask-wearer's actual facial appearance. Affective attributions may then have been made on the basis of this smile.

An alternative explanation, more in line with Bem's (1972) self-perception theory, is that a masked individual is not so much judged on their 'facial' appearance, as on their act of choosing a particular 'facial' appearance. According to self-perception theory, the kind of question that an observer asks is, 'What kind of person would behave in this way?' Faced with an individual wearing a happy mask, therefore, an observer may ask herself, 'What kind of person chooses to wear a happy mask?'. She may then come to the conclusion that such a person must be happy, playful, immature, etc.

Both these explanations seem possible. However, on the basis of both the research design and the post-experimental responses in the present study, it is tempting to tend towards the former explanation. This is for two reasons. First, for the participants in this study, there would be little basis from which to assume that the actor has actively chosen to wear her particular mask. Indeed, they had been told that the actors' face has been 'kept anonymous' --- a passive sentence construction which suggests that this was something done to the actor rather than an active choice on the actors' behalf. Second, whilst a number of participants, in the post-experimental discussions, said that they found it difficult to judge the postures accurately because the

facial expression was 'getting in the way', there were no post-experimental comments from the participants which referred to the actors' choices of behaviour: e.g. 'I was wondering why she chose to wear a happy mask', or, 'I found it difficult to rate the pictures as positive because it was so incongruent with the mask she had picked.'

8.4.2 Other Findings

Along with self-attribution theory, the findings from this study throw some light on two other theories of the mask's psychological effect discussed in chapter two. In section 2.2.5, Maude-Roxby (1994) suggests that the mask may transform its wearer because 'the person looking at you sees you differently'. The present study confirms that this latter change in perception is, indeed, the case. There is no evidence from this study to show that this then leads on to specific behavioural responses from the observers and the shaping of the mask-wearer's behaviour. However, if the way in which the mask-wearer is perceived by her audience changes, it seems very likely that this will have some kind of impact on the interpersonal dynamic between mask-wearer and audience. Again, this is an area that would be very interesting to investigate further.

The findings from this study also throw some light on the question of whether a masked individual will believe that their audience 'sees' them as their masked character (section 2.1.2). The findings here do not directly show that this takes place, but it does show that observers tend to see the mask-wearer as her character. The question now is whether the mask-wearer actually knows this: either at a reflective or pre-reflective level. If so --- and this might be something that would be relatively easy to test empirically, with such a question as: 'To what extent do you think that the observers think that you are the mask character?' --- then this would add considerable weight to the hypothesis that a mask-wearer may feel more able to 'come out of their shell' because they know that the person who is looking at them doesn't think it's them.

8.5 SUMMARY

The findings from this study provide strong support for the hypothesis that the wearing of a mask will transform how that mask-wearer is perceived, such that others will attribute to her the characteristics represented in her

mask. This is a finding of considerable significance, because it puts the mask 'on a par' with other physical coverings --- such as spectacles and clothes --- which have been shown to affect how other individuals are perceived. Given that there is some evidence to show that physical coverings which affect other-perceptions can also affect self-perceptions, it would be logically consistent to conclude that the mask may be able to do the same.

Furthermore, the findings from this study provide some initial support for the hypothesis that a mask may transform its wearer because of the differential feedback she receives from her observers. The findings from this study also lay the foundations for the hypothesis that a mask-wearer feels less inhibited because she knows that others see her 'as her mask'.

CHAPTER NINE: AN EXPERIMENTAL INVESTIGATION INTO THE TRANSFORMATIVE EFFECT OF MASK-WEARING ON SELF-ATTRIBUTIONS

9.1 INTRODUCTION

9.1.1 Aims

The main aims of this study were to build on the previous two studies by directly testing the fourth and fifth hypotheses developed in chapter six. Given the findings of the chapter seven study, however, the wording of the first of these hypotheses were slightly modified to the following:

> The wearing of a mask, under conditions in which an individual is focused on their 'facial' appearance, will lead to a transformation in the direction represented by the mask through a self-attributional process.

This study also provided an opportunity to re-test the seventh hypothesis developed in chapter six, that individuals high in public self-consciousness will experience a greater degree of transformation when wearing a mask than individuals low in public self-consciousness.

9.1.2 Methodological Issues

To test whether a mask does, indeed, transform its wearer as a consequence of self-attributional processes, the main aim in designing this study was to replicate the findings of the chapter seven study --- that individuals seeing themselves wearing a mask would feel more like the mask than individuals not wearing a mask --- but in such a way that alternative explanations for this transformative effect could be ruled out.

From the chapter seven study, the main alternative explanation to why participants experienced a greater degree of transformation in the masked+mirror conditions was because the mask's facial expression --- as seen in the mirror --- served as an external cue. Hence, in this

study, a masked+mirror condition was not compared with a non-masked or masked (non-mirror) condition, but, as suggested in section 7.4.1, with a condition in which participants looked at a mask but did not wear it. In doing so, any differences between these two conditions could not be attributed to the fact that the mask served as an external cue.

In the chapter seven study, a second alternative was the possibility that the transformation had come about because participants in the masked+mirror condition had imitated the facial expressions of the mask, such that the transformation in affect was a consequence of physiological feedback rather than cognitive self-perceptions. Hence, in this study, rather than using two masks which differed in their 'physiological constitution', the current study used two masks which were absolutely identical in their physical make-up, differing only in that one was painted as a 'male' mask, and the other as a 'female' mask. Any differences between the effects that these two masks produced, therefore, could not be accounted for in terms of the different ways in which the participants physiologically imitated the masks' 'faces'.

As well as narrowing down the possible factors that might account for the transformative effect, there was also an attempt in this study to narrow down the dependent variables, such that they specifically measured any changes in self-attributions. This was done so that the possible effects of seeing oneself with a different appearance could be eliminated. Whereas the study in chapter seven, therefore, used relatively open-ended measures, the two main measures used in this study were much more direct, specifically asking participants to rate how much they felt like <u>the person</u> represented in the mask, and how much they felt like <u>the person</u> that they normally felt like.

Furthermore, whereas the study in chapter seven assumed that a smiling mask would be seen as representing positive feelings and a frowning mask seen as representing negative feelings, this study made no such assumptions about how the masks would be perceived. Rather, characteristics associated with each of the masks were identified by first conducting a pilot study in which judges were asked to rate each of the masks on a variety of characteristics. Those characteristics in which there were significant differences between the two masks could then be used as dependent measures, in the

hope that this would provide a more veridical measure of the 'personality represented by the mask.

A number of other significant modifications were also incorporated into the design for this new study. To lessen the demand on participants to feel 'something', to increase the external validity of the study by making it less 'internally'-focused, and to reduce the extent to which participants might 'unconsciously' behave like the mask character, participants were given a simple task to perform. This was to draw the mask. This task also had the advantage that it kept the participants' attention on their 'facial' appearance throughout. Dependent measures were then taken once this task had been completed. To reduce demand characteristics further, a mixed-, rather than wholly within-participants design was used.

The present study also returned to standardising the amount of time participants had for each condition, as a means of triangulating with the less time-standardised conditions in the chapter seven study. To compensate for the fact that this might mean that participants were wearing the mask for longer than they wanted to, the informed consent form put a greater emphasis on the participants' right to choose not to continue with the study. Also, in the post-experimental interview, the participants who said that they had felt uncomfortable wearing the mask were asked whether they had felt that they could withdraw, to ensure that participants had understood and 'believed' what was said on the informed consent form. To compensate for the fact that standardised time would mean greater contact with the researcher, every attempt was made to ensure that there was no eye-to-eye contact once the experiment had started, and that the researcher was looking away from the participants at all times.

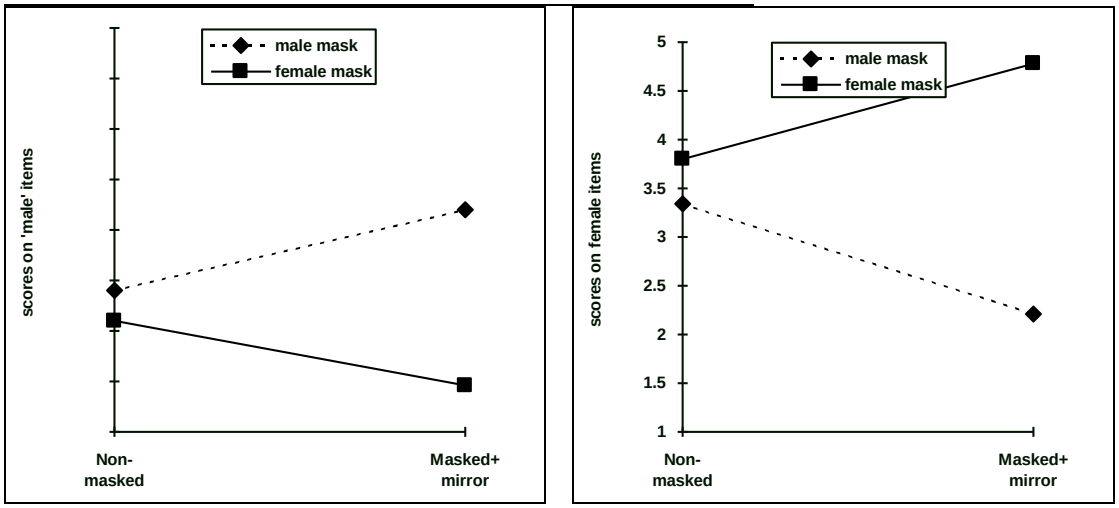
Finally, in contrast to the study in chapter seven, the present study divided participants into 'highs' and 'lows' on public self-consciousness prior to the allocation of participants into the between-participant conditions. This was to ensure that any differences between these two groups could not be attributed to sequence effects.

9.2 METHOD

9.2.1 Design

This study used a mixed design, with one within-participants independent variable: masking; and one between-participants independent variable of interest: type of mask. The dependent variables were participants' self-reported ratings of how much they felt like themselves, how much they felt like the person represented in the mask, and how much they felt like items which had been previously associated with the male mask and items which had previously been associated with the female mask. It was predicted that participants would rate themselves as more like the person represented in the mask, and less like themselves, in the masked+mirror conditions as opposed to the non-masked control conditions. It was also predicted that there would be a significant interaction effect between masking and type of mask on the 'male' and 'female' items (see graph 9.1). However, it was predicted that these main and interaction effects would only occur for participants high in public self-consciousness.

GRAPH 9.1
Predicted interaction between masking and type of mask for scores on 'male' and 'female' items



9.2.2 Participants

Fifty-six female participants were recruited for this study, all of whom were Open University students taking an introductory psychology summer school module (the year after the chapter seven study). Only female participants were recruited for this study because the dependent

measures were assessing feelings of 'masculinity' and 'femininity', for which men and women would almost certainly have very different baselines. Hence, if both men and women were used, it would be necessary to ensure that they were evenly spread amongst the different conditions. With the psychology summer school students, this would not have been practical, as only a few men attended this module each week. The participants came from similar professional backgrounds as those in the chapter seven study. The mean age of the participants was 34.

Recruitment of the participants followed a very similar procedure to the chapter seven study: with a very short talk, identical to the one in chapter seven (see appendix 7a), being given to the summer school students at their introductory briefing. The only difference in recruitment procedure in this study is that participants were not asked to sign up (as this had produced a relatively low response in the chapter seven study) and were simply approached during the students' own participant-pools and asked if they 'would be interested in' taking part in the 'mask study'.

9.2.3 Apparatus and Materials

The design of the room was similar to the design in the chapter seven study. However, in this study, the full length mirror was placed directly in front of the table, such that participants were looking straight into it from the moment that they sat down. Also, in the present study, the masks were not placed on the table when the participants entered the experimental room. Instead, on the far left-hand corner of the table was a set of twelve, fibre-tipped Crayola colouring pens in a transparent pencil case, and a pad of W. H. Smith's A4 Graph Paper, ruled at 2, 10, and 20mm.

Two masks were used for this study (see illustration 9.1). These masks were structurally identical to each other --- both starting off as a 'neutral' mask, as used in the study in chapter four. However, a colleague of the researcher was asked to try to and make one of these masks as 'male' as possible, and the other as 'female' as possible, without adding any characteristics that might be physiologically 'imitate-able' (e.g. a raised eyebrow or pouting lips). The male mask was thus painted in dark skin tone, with a full beard and moustache. In strong contrast, the female mask was painted with a pink-ish skin tone, lipstick, blusher, eye-liner and eyeshadow.

ILLUSTRATION 9.1
Male and female masks

The informed consent form used for this study was similar to that used in the chapter seven study (see appendix 9a). However, because the dependent measures were somewhat more nested in this study, the line informing participants that they would not be 'surprised at the end of the study by being told what the study is really about' was taken out. Given the ethical concerns of the chapter seven study, it was also decided to extend the paragraph about possible adverse experiences when wearing the mask, such that participants felt as free as possible to choose to terminate their participation in the study. The informed consent form also asked participants to write down their age and occupation, so that this information could be kept separate from their other responses.

The Public Self-consciousness Scale used in this study was identical to the one used in the chapter four study --- with a four point scale from 'a lot like me' to 'not at all like me' --- except that it was not embedded within the fifteen other items of the self-consciousness scale (see appendix 9b). Instead, just two 'filler' items were added to the beginning of the scale and one to the end of the scale --- all three concerned with how the individual might judges others --- as a means of somewhat nesting the exact variable that this scale was measuring.

A post-task questionnaire, presented to the participants after each task, consisted of fourteen randomly organised self-report items, which asked them to indicate on each

of the seven-point Likert-type scales beneath these items the extent to which the items described how they were currently feeling (one = 'not at all', seven = 'totally') (see appendix 9c). A seven-point scale was used rather than an eleven-point scale, as, in the previous study, it was noted that some participants tended to mark the end-points for all their responses. The idea of a shorter scale was therefore to minimise the 'weight' of this response set. Also, in contrast to the previous questionnaire, it was decided to ask participants 'how do you feel now' rather than how they felt during the task, so that they would not need to reflect back, but could quickly report on their immediate feelings.

The fourteen items measured five sets of variables.

To measure the extent to which participants felt that their sense of self was the same as it usually was, two items were developed: 'I feel exactly like the same person as I normally do' (item ten), and 'I feel like a somewhat different person to my usual self' (item three). 'Exactly like' and 'somewhat different' were used to try and avoid ceiling and floor effects respectively, as it was expected that the degree of transformation would be relatively small. Assuming inter-item reliability, total 'like self' scores would be calculated from the average scores of these two items, with the scores from item three reversed.

To measure the extent to which participants felt that they had become the 'person' represented in the mask, two items were developed: 'I feel somewhat like I am the "person" represented in the mask' (item five) and 'I feel like an entirely different person to the "person" represented in the mask' (item thirteen). Assuming inter-item reliability, total 'like mask' scores would consist of the average of these two scores, with the score from item thirteen reversed.

The third and fourth sets of measures, four items for each, were designed to assess the extent to which participants felt 'male' and 'female'. To obtain these items, a convenience sample of twelve women, of roughly the same age as the expected Open University sample, were shown the male and female masks, and asked to imagine how well forty different personality items described each of the mask's 'personalities' (see questionnaire in appendix 9d). These items were taken from the male and female scales on Bem's (1974) sex role inventory.

Once these inventories had been completed, those of the forty items which would not have been appropriate to the post-task questionnaire --- e.g. 'No harsh language' --- were discarded. Of those remaining items, eight were then used in the post-task questionnaire. Four of these were the items rated as best describing the male mask's personality as compared with the female mask's personality: 'aggressive' ($t[11] = 2.77$, $p = .018$) (item four), 'analytical' ($t[11] = 1.96$, $p = .076$) (item seven), 'masculine' ($t[11] = 6.01$, $p = .000088$) (item eleven), and 'assertive' ($t[11] = 2.33$, $p = .040$) (item fourteen). The other four were the items described as best rating the female mask's personality as compared to the male mask's personality: 'childlike' ($t[11] = -2.6$, $p = .025$) (item two), 'feminine' ($t[11] = -4.66$, $p = .00069$) (item six), 'sympathetic' ($t[11] = -2.53$, $p = .028$) (item eight)[12], and 'affectionate' ($t[11] = -2.88$, $p = .015$) (item twelve).

A final two measures were added to the post-task questionnaire to check for the possibility that participants felt more like the 'person' in the mask --- and less like themselves --- in the masked+mirror condition, as a consequence of a reduction in private self-awareness. This was because, although participants in the non-masked condition were asked to look directly at their mask so that they could not see their face in the mirror, there was the possibility that they might have been able to see something of their face. As has been shown, this might then lead to an increase in private self-awareness (e.g. Buss, 1980). The result of this might be that participants in the non-masked conditions would then become less responsive to external cues (e.g. Johnson and Downing, 1979), and would therefore feel less like the character represented in the mask. To test for this possibility, the two measures of private self-awareness used in the chapter four study were included in the questionnaire (modified to the present tense): 'I feel very aware of myself' (item nine), and 'Rather than thinking about myself, my mind is concentrated on what is going on around me' (item one). As was shown in that study, the reliability of these items is highly questionable. However, as no other items have been developed to measure private self-awareness, it was decided to use these two items again. If there was

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[12] Following pilot tests of this questionnaire, 'sympathetic' was slightly modified to 'sympathetic (to others in general)', as a handful of pilot participants were unsure who it was they were supposed to be feeling sympathetic to.

any inter-item reliability between these two items, total private self-awareness scores would consist of the average of these two scores, with the scores from item one reversed.

9.2.4 Procedure

Participants were welcomed into the room and seated in front of the mirror. They were presented with the informed consent form, and asked to 'have a read through it', and sign it if they were willing to continue with the study. They were also told that it was 'absolutely OK' if they did not wish to continue with the study.

When participants indicated that they had completed this form, they were then given the public self-consciousness questionnaire. When they had indicated that they had completed this, their scores was quickly calculated (this could usually be done in a matter of seconds), and participants with a PBSC score greater than eleven (the median score in the chapter four study) were randomly allocated to one of four high PBSC conditions, whilst participants with a PBSC score of eleven or less were randomly allocated to one of four low PBSC conditions.

The four conditions for both high and low PBSC participant were:

- non-masked (male mask) followed by masked+mirror (male mask).
- masked+mirror (male mask) followed by non-masked (male mask).
- non-masked (female mask) followed by masked+mirror (female mask).
- masked+mirror (female mask) followed by non-masked (female mask).

Hence, overall, the participants could be allocated to one of eight possible treatment conditions.

Participants in the first of these conditions were handed the male mask (it had been previously kept out of sight behind a chair), and asked to put it on. They were then asked to take two minutes to draw the mask that they were wearing, using the pens and paper that were on the table. They were told that they would be informed when the two minutes were up. The participant was also asked to keep the mask on once they had completed the two minutes.

The researcher then sat down away from the participant and timed the two minutes. When the time was up, the participant was handed a post-task questionnaire, and was asked to 'fill in the scales to describe how you're feeling now'.

When they had completed this, the participant was asked to take the mask off, and the male mask was then placed over a small hook on the top of the mirror. To ensure participants were not looking directly at their faces in the mirror (and hence heightening their private self-awareness), the participant was asked if they could see their eyes through the eyes of the mask. If participants said that they could not, they were asked to move until they could. This was a way of ensuring that they were looking at the mask 'face-on', such that they could not see their reflection because it was covered by the mask. Once participants could see their eyes, they were told that they did not need to be looking at their eyes any more (they would not have been able to draw the mask if they had held this different point of focus), but that they should stay in roughly that position for the following task.

The participants were then asked to draw the mask again, 'but this time with it on the mirror rather than on your face.' Again, they were given two minutes, and when the time was up they were handed a second post-task questionnaire.

When the study was complete, they were then thanked for their time, and asked if they would mind answering a couple of further questions. These were recorded as hand-written notes by the researcher. The participants were first asked the general question, 'How did you find that?', which led in to a more specific debriefing along the lines suggested by Mills (1976), to ascertain the extent to which participants were aware of the experimental hypotheses. This often led on to a more general discussion about the study, its aims and hypotheses; masks in general; or the participant's own individual responses to the mask.

Finally participants were given a debriefing sheet (appendix 9e), which they were told that they could take away and read in their own time. It was explained to participants, however, that because the study was being run with their colleagues, it was important that they 'kept the debriefing sheet and the purpose of the study to themselves'. All participants agreed to this.

The procedure was identical for participants in all other sequences, apart from the type of mask worn, and whether the mask was worn first or placed on the mirror first.

9.2.5 Method of Analysis

Inter-item reliability tests were carried out on the combined questionnaire measures.

Inter-item reliability on the public self-consciousness scale items was again high, with an alpha coefficient of .87.

For the two items measuring 'like self' ('I feel like exactly the same person as I normally do', and 'I feel like a somewhat different person to my usual self'[reversed]) the alpha coefficient was .75. This was considered a sufficient degree of inter-item reliability and these two items were combined.

For the two items measuring 'like mask' ('I feel somewhat like I am the "person" represented in the mask', and 'I feel like an entirely different person to the "person" represented in the mask' [reversed]) the alpha coefficient was .48. This was not considered a sufficient level of inter-item reliability, and these items were therefore analysed independently. These items will subsequently be referred to as 'like mask' and 'different to mask' respectively.

As with the study in chapter four, the two items intended to measure private self-awareness showed a low level of inter-item reliability, with an alpha coefficient of .31. These items were also therefore treated as separate dependent variables.

Participants were coded as hypothesis-aware if they expressed an awareness of any or all of the experimental hypotheses.

Frequency distribution charts on the post-task questionnaire items showed a non-normal, skewed distribution on a number of the items. Floor effects were clearly noticeable on the measures of 'like mask', 'masculine', 'aggressive', 'childlike', and 'affectionate'; and ceiling effects were clearly noticeable on the measures of 'different to mask'. For the measure of 'like self', there was a noticeable ceiling effect in the non-masked condition. Given this non-normal distribution pattern, it would have been

appropriate to analyse this data using a non-parametric test. However, because of the complex nature of the analysis required for this data, no such non-parametric tests are available. Hence, the dependent measures were analysed using a mixed model multivariate analysis of variance on version seven of SPSS, with one within-participants factor: masking; and two between-participants factors: type of mask and sequence (masked+mirror then non-masked versus non-masked then masked+mirror). Because of the non-normal distribution of parts of the data, however, any findings of 'borderline' significance must be treated with substantial caution.

9.3 RESULTS

Results of the multivariate analysis, using Wilks' lambda, can be seen in table 9.1. (A more detailed analysis of the total data is presented in appendix 9f). As predicted, this shows a significant main effect for masking, and a significant masking × gender of mask interaction. There is also a significant masking × sequence interaction.

TABLE 9.1
Multivariate tests for between-participant and within-participant factors

Factor	F	Hyp. df	Error df	p
Between-participants				
Sequence	1.3	13	40	.25
Type of mask	1.78	13	40	.081
Sequence × Type of mask	1.06	13	40	.42
Within-participants				
Masking	4.66	13	40	.000081
Masking × Sequence	2.17	13	40	.031
Masking × Type of mask	2.29	13	40	.022
Masking × Type of mask × Sequence	0.95	13	40	.51

Univariate analysis of the dependent variables on the masking dimension are shown in table 9.2. As predicted, participants in the masked+mirror conditions felt significantly more like the character represented in the mask, less unlike the character represented in the mask, and less like themselves than in the non-masked condition. Contrary to expectations, however, participants in the masked+mirror condition felt significantly less concentrated on what was going on around them, and significantly more aware of themselves. Also, participants in the masked+mirror condition felt significantly more aggressive, masculine and childlike, and significantly less assertive, feminine, sympathetic and affectionate, than in the non-masked condition.

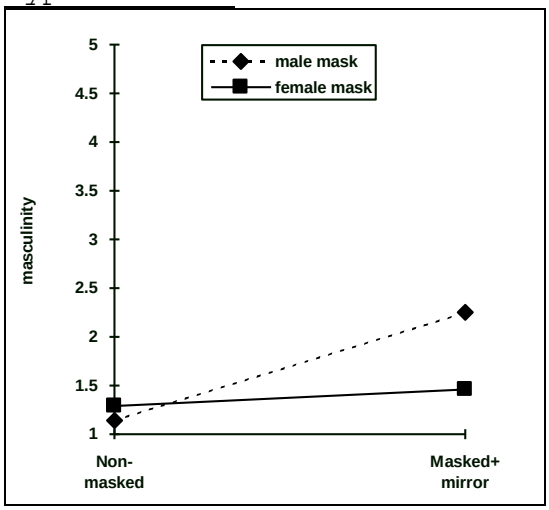
TABLE 9.2
Means on dependent measures, standard deviation, univariate F ratios and p values for masked+mirror and non-masked conditions

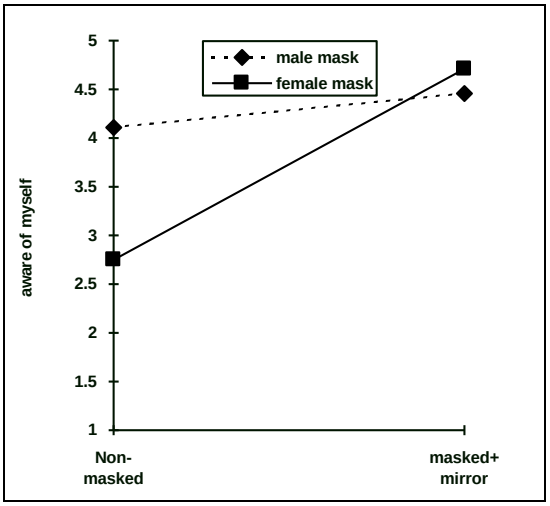
	Masked+ mirror		Non-masked			
Measures	M	SD	M	SD	F(1, 52)	p
Like mask	2.75	1.97	1.64	1.34	20.26	.000038
Different to mask	4.34	2.26	5.59	2.15	9.41	.0034
Like self	3.89	2.01	5.82	1.18	52.35	<.000001
PRSA 1 (mind on what's around me)	4.04	2.34	4.96	1.97	12.26	.00098
PRSA 2 (aware of myself)	4.59	1.91	3.43	2.02	19.97	.000043
Aggressive	1.52	1.26	1.13	0.57	6.76	.012
Analytical	3.23	2.06	3.57	1.92	1.69	.20
Masculine	1.86	1.65	1.21	0.53	9.11	.0039
Assertive	3.07	1.98	3.66	1.79	9.44	.0034
Childlike	2.79	1.94	2.32	1.62	4.62	.036
Feminine	3.13	2.13	4.04	1.92	8.28	.0060
Sympathetic	3.59	1.93	4.20	1.85	9.93	.0027
Affectionate	2.20	1.55	3.04	1.86	16.03	.00020

Univariate tests on the masking × type of mask interaction found significant effects for just two of the dependent variables: aware of myself ($F[1,52] = 9.57$, $p = .0032$), and masculine ($F[1,52] = 4.75$, $p = .034$). Mean scores on these two items can be seen in graph 9.2. This shows that, as predicted, participants wearing the male

mask experienced a greater increase in feelings of masculinity from the non-masked to masked+mirror condition, as compared with participants wearing the female mask. This graph also shows that participants wearing the female mask experienced a greater reduction in awareness of themselves from the masked+mirror to non-masked condition, as compared with participants wearing the male mask.

GRAPH 9.2
Mean scores on 'I feel masculine' and 'I feel very aware of myself' in masked+mirror and non-masked conditions, by type of mask

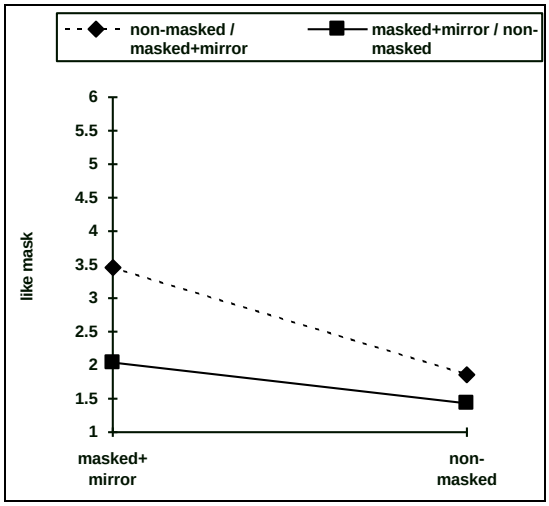


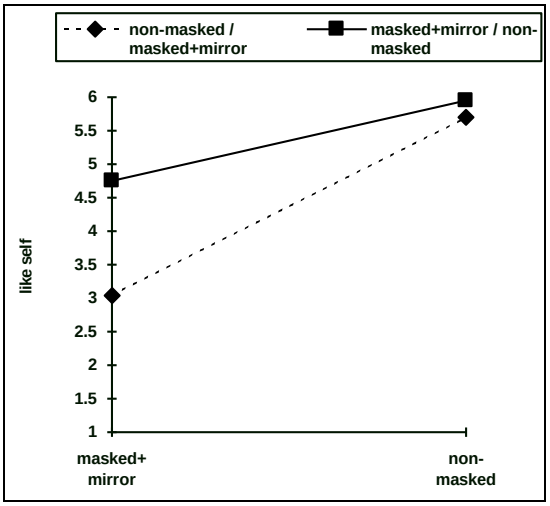


No significant interaction effect --- between masking and type of mask --- were found for the seven other 'gender' items.

Univariate tests on the masking × sequence interaction found significant effects for two of the variables: 'like mask' ($F[1, 52] = 4.13$, $p = .047$), and 'like self' ($F[1, 52] = 7.55$, $p = .0082$). Mean scores on these two items can be seen in graph 9.3. This shows that participants who looked at the mask first and then wore it experienced a greater change in the predicted direction than participants who wore the mask first and then looked at it.

GRAPH 9.3
Mean scores on 'like mask' and 'like myself' in masked and non-masked conditions by sequence





Twenty of the participants (five for each condition) scored eleven or less on the PBSC scale and were coded as 'low PBSC', whilst 36 of the participants scored more than eleven and were coded as 'high PBSC'. Separate mixed model multivariate analyses of variance were conducted for both 'highs' (see appendix 9g) and 'lows' (see appendix 9h). As predicted, there was a significant main effect for masking for the high PBSC participants ($F[13, 20] = 4.27$, $p = .0020$), but not for the low PBSC participants ($F[13, 4] = .93$, $p = .59$). Univariate tests on the masking factor for high PBSC participants showed significant differences in the predicted direction for 'like mask' ($F[1, 32] = 20.22$, $p = .000085$), 'different from mask' ($F[1, 32] = 6.28$, $p = .018$), and 'like self' ($F[1, 32] = 38.63$, $p < 0.000001$). The interaction between masking and type of mask was not significant for either high or low PBSC participants. The only other multivariate test that reached significance was a masking × sequence effect for the high PBSC participants ($F[13, 20] = 2.34$, $p = .04$).

TAble 9.3 shows the mean masked+mirror and non-masked scores for participants high and low on PBSC for the three main dependent variables, and the mean difference between the two within-participant conditions (i.e. masked+mirror scores - non-masked scores). This shows that participants high in public self-consciousness, as compared with participants low in public self-consciousness, did not experience a notably greater change in 'like mask' feelings, 'different to mask' feelings, or 'like self' feelings from the masked+mirror to non-masked conditions.

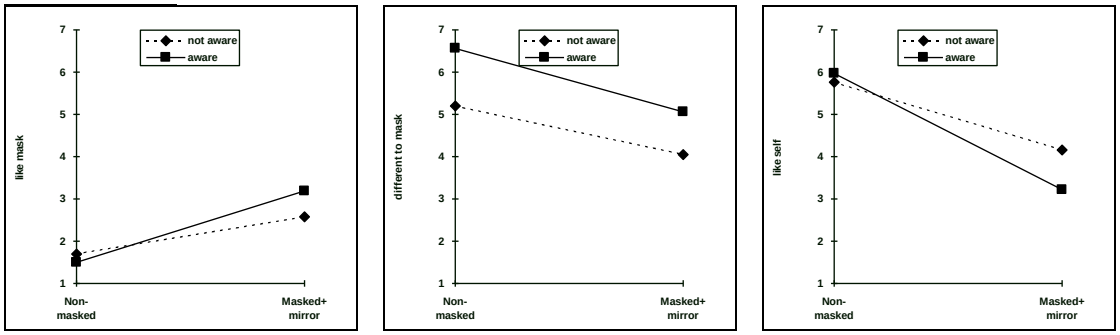
TABLE 9.3
Mean scores on main dependent variables for participants high and low in public self-consciousness

	like mask			different from mask			like self		
PBSC	mask M	non- M	diff M	mask M	non- M	diff M	mask M	non- M	diff M
High	2.69	1.53	1.17	4.25	5.47	-1.2	3.88	5.88	-2.0
Low	2.85	1.85	1.00	4.50	5.80	-1.3	3.93	5.73	-1.8

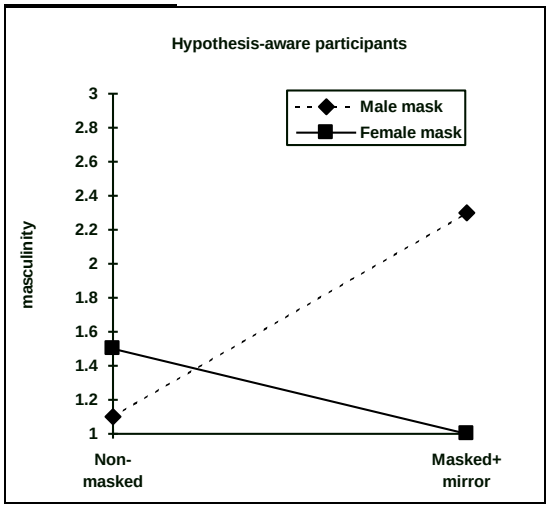
Note: 'mask' = masked+mirror condition, 'non-' = non-masked condition, 'different' = difference between conditions

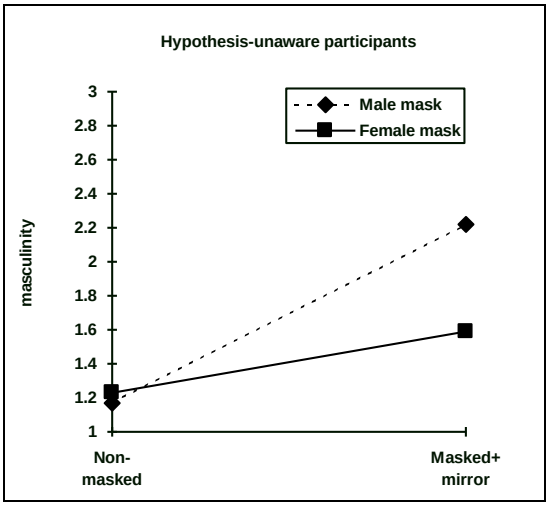
Following the post-experimental interview, sixteen of the participants were coded as being hypothesis-aware. In all cases, this was an awareness that the study might be something to do with feeling like the mask when wearing it. Comparisons of the means for the aware and non-aware participants on three of the main dependent measures that had reached significance --- 'like mask', 'different from mask' and 'like self' --- show that hypothesis-aware participants tended to give responses that were more in the predicted direction than non-aware participants (see graph 9.4). Aware participants also showed a greater interaction between masking and type of mask on measures of masculinity as compared with non-aware participants (see graph 9.5).

GRAPH 9.4
Mean scores on central dependent measures in masked+mirror and non-masked conditions by hypothesis-awareness



GRAPH 9.5
Mean scores on 'I feel masculine' in masked+mirror and non-masked conditions by gender of mask by hypothesis-awareness





For these reasons, it was decided to repeat the repeated measures analysis of multivariance, using only the data from the 47 participants who were coded as hypothesis-unaware. Again, multivariate tests found a significant main effect for masking ($F[13, 24] = 2.56$, $p = .022$), but not for any other main or interaction effects (see full analysis in appendix 9i). Univariate tests on this variable showed significant differences in the predicted direction for 'like mask' ($F[1, 36] = 11.33$, $p = .0018$), 'different to mask' ($F[1, 36] = 5.2$, $p = .029$), and 'like self' ($F[1, 36] = 27.48$, $p = .0000073$).

For descriptive purposes, correlations between the dependent measures can be seen in table 9.4.

TABLE 9.4
Pearson correlations for dependent measures (n = 112)

Measure	Like mask	DM	LS	PRSA 1	PRSA 2	AGG	ANAL	MASC	ASS	CHILD	FEM	SYMP
Diff. to mask	-.33*											
Like self	-.55*	.37*										
PRSA1	-.14	.01	.22*									
PRSA2	.26*	-.15	-.52*	-.19								
Aggressive	.45*	-.32*	-.43*	.06	.23*							
Analytical	.14	.13	.06	.05	.08	.06						
Masculine	.40*	-.14	-.42	.03	.20*	.51	.00					
Assertive	-.03	.09	.17	.10	.11	.13	.37	.07				
Childlike	.14	.04	-.24*	-.22*	.12	.07	-.22	.02	-.12			
Feminine	-.25*	.14	.31*	.02	.08	-.13	.10	-.26*	.29*	-.09		
Sympathetic	-.03	.16	.11	.02	.17	-.03	.28*	-.08	.33*	-.01	.37*	
Affectionate	-.16	.18	.18	.04	-.06	-.09	.16	-.20*	.37*	.07	.34*	.51*

Note: *p < 0.05. Exact p values can be seen in appendix 9f.

9.4 DISCUSSION

9.4.1 Hypothesis one: The wearing of a mask, under conditions in which an individual is focused on their 'facial' appearance, will lead to a transformation in the direction represented by the mask through a self-attributional process

The findings of this study would seem to provide relatively strong support for this hypothesis. Participants in the masked+mirror conditions, compared with participants in the non-masked conditions, rated themselves as both significantly more like, and significantly less different to, the 'person' represented in the mask. Given that the p values in both of these cases were less than 0.005, it seems unlikely that this is a false positive result as a consequence of the non-normal, skewed distribution.

However, the fact that there was a low alpha coefficient between the 'like mask' and 'different to mask' items does raise some concerns about the reliability of these measures. If they were not measuring the same variable, what was it that they were measuring? Possibly, the low inter-item reliability was a result of the floor and ceiling effects, with many of the scores 'tightly packed' at either end of the scales. Also, the semantic difference between the two items --- 'somewhat...' and

'entirely different...' --- may have contributed to the low reliability. But, at the same time, the 'different to mask' item was a fairly straightforward reversal of the 'like mask' item, and the fact that scores on these two items did not closely correlate suggests that the respondents may not have been scoring these items too carefully. In future studies, it would be advisable to use counterbalanced measures that were an even more direct reversal of one another: for instance, 'I feel like the person in the mask,' and 'I do not feel like the person in the mask.' Also, it would be advisable to instruct participants to read the items carefully before they respond to them, and to get them to check over their responses to make sure they are correct. The fact that, in the present study, the 'like mask' and 'different from mask' items did not correlate closely does not take away from the significance of the findings. However, if a more reliable measure could be develop, then the exact dimension along which this significant difference was occurring would be clearer.

The data from the gender-related items, however, shows less support for hypothesis one. The interaction between masking and type of mask was significant for only one of these items (feeling masculine), though for three-quarters of the items, the difference was in the predicted direction. This finding is particularly surprising, given that participants in both male and female masks described themselves as feeling more like the masks that they were wearing. How, then, can this apparent anomaly be explained?

One strong possibility is that the participants who wore the masks may have seen very different things in the 'faces' to those judges who rated the masks in the pilot study. This could have been because the judges were not from the same population as the participants. A more likely explanation however, is that the characteristics of the masks looked very different when the participants were wearing them, as compared with when the judges were rating them. A couple of participants in the post-experimental interview, for instance, pointed out how aggressive and frightening the female mask looked when they could see their eyes behind it. If this is the case, then in subsequent studies it might be useful for the judges to rate the characteristics of the mask whilst they are seeing themselves wearing them. To obtain even greater internal validity, it might be advisable to have the participants, themselves, rate the kinds of psychological characteristics that they see in the masks.

Another possibility is that participants may have reacted in a compensatory way to seeing themselves wearing a particular type of 'face'. One of the participants in the male mask condition, for instance, said that she wanted to feel more feminine when wearing the mask to compensate for how she looked. If this reactance effect was more generalisable, however, then one would not have expected to find that participants overall rated themselves as more like the character represented in the mask when they were wearing it.

A third possibility might be that the constancy of the facial expressions between the masks meant that participants did not experience any strong differences in affective feedback between the two. Whilst judges did rate the masks as different on levels of sympathy, aggression, assertiveness, etc., it may have been that these differences were dwarfed by the physiological feelings that participants were experiencing at the time of wearing the masks.

However, it may be that this finding is not so much a consequence of the particular masks used in this study, as a consequence of the transformative potential of the mask, per se. In other words, it may be that the mask is less effective at bringing a transformation about at the level of affect than it is at the level of cognition/self-perception. This would make sense in terms of self-perception theory, as what is being most immediately transformed here are the cognitions through which an individual perceives themselves, rather than more physiological affects. Clearly, further research is needed here, but whilst the results of this study confirm the fact that seeing oneself wearing a mask can transform how one perceives oneself, they provide less support for the hypothesis that the wearing of a mask transforms an individual at an affective level.

There is also a fourth means of explaining why participants said that they had experienced a change in self-concept and 'masculinity' when wearing a mask, but not in affect. As suggested in section 7.4.1, it may be that the wearing of a mask does not bring about changes in self-perception at a psychological level, but simply affects the way in which an individual perceives their external physical appearance. In other words, when participants, in the masked+mirror conditions, rated themselves as feeling more like the person in the mask or more masculine, they may have simply been saying that they saw themselves as looking more like the person in the mask or more masculine. This would also explain why

there is a significant interaction on the masculinity items but not the more affective ones: because, of all the items, 'masculinity' is probably the one which is closest to a physical descriptor.

However, whilst such an explanation is feasible, it was not generally the way in which participants described their experience in the post-experimental debriefing (see sample of transcribed notes in appendix 9j). Few participants made a point of saying that they were struck by how different they looked physically. When participants talked about feeling different, they talked about something that was not just at the level of the physical appearance, but at the level of 'personality' and 'identity'. Nevertheless, given that this is only anecdotal, in subsequent studies it may be useful to clarify that when participants say they feel like the 'person' in the mask, they are not just talking about change in physical appearance. One way of doing this might be to ask a question like, 'To what extent has your sense of identity/personality changed?' Such a question could also be asked as part of a more in depth, qualitative interview --- as in the chapter four study.

In terms of internal validity, the data also shows that, for the 'like mask' item and the masculinity interaction, the difference was considerably greater for hypothesis-aware participants. This raises the possibility that these findings were to some extent an artefact of the demand characteristics of the experiment. Given that both the 'like mask' item and the 'different from mask' item were significant for the non-aware participants alone, it seems unlikely that demand characteristics can entirely account for the overall significance. Furthermore, as Kruglanski (1975) has argued, the relationship between responses on the dependent variables and awareness of the experimental hypothesis --- as assessed post-experimentally --- is a fundamentally correlational one.

In support of the demand characteristics explanation, however, is the finding that participants' 'like mask' responses were significantly more in the predicted direction in the second condition than in the first condition (i.e. the significant masking × sequence interaction). From this, it might be argued that the significant differences emerged because participants, when filling in their responses the second time, became aware of the purpose of the study, and therefore responded accordingly.

Such an explanation of the significant interaction, however, can not explain why there was a substantially greater increase in 'like mask' rating when participants went from the non-masked condition to the masked+mirror condition ($\underline{M}$ = 1.68), as compared with the decrease in ratings when participants went from the masked+mirror condition to the non-masked condition ($\underline{M}$ = 0.67) (see graph 9.3). A more likely explanation for this, and for the significant interaction between masking and sequence, would be in terms of floor effects. This can be outlined as follows. Participants who wore the mask first did not feel much like the character in the mask (mean of 2.55 on a seven-point scale), but felt even less so when they were looking at the mask on the mirror. However, as around half of them had already rated their feelings of 'like mask' at two or less, there was not much further lower down the scale they could go. On the other hand, participants who did the non-masked condition first rated themselves almost entirely unlike the mask-character (mean of 2.18 on a seven-point scale), but then, in feeling a bit more like the mask character in the masked+mirror condition, had the whole upper part of the scale into which they could indicate their greater sense of being like the mask character. Hence, they would be likely to show a greater increase from non-masked to masked+mirror conditions than participants in the first sequence.

Another explanation for the different ratings from the first to second condition might be that participants felt more relaxed after the second task, and therefore more responsive to the experimental manipulations. This is indeed what one participant said in the post-experimental interview. Having spent longer with the mask by the time of the second task, they may also have then been more familiar and therefore more responsive to it. If this is the case, then in future studies it may make sense to use some kind of warming-up exercise so that people relax and develop a familiarity with the experimental situation.

What seems to emerge from this discussion, then, is that the wearing of a mask does increase the extent to which an individual sees themselves as the 'person' represented in the mask, but that this increase is relatively small. This is indicated particularly by the mean difference of less than 0.40 on ratings of 'like mask' between the masked+mirror and non-masked conditions on the first condition. Given that an attempt was made to rule out all other explanations, it seems probable that this transformation is due to the kind of self-attribution process outlined by Laird (1974).

Such a conclusion is supported by the anecdotal evidence from the post-experimental interviews. Of the 56 individuals who took part in the study, around a quarter (n = 14) said that they did feel like they were becoming the mask-character when they saw their masked-reflection in the mirror. One participant (participant 29), for instance, said that when she was looking at herself in the mask she felt that she was taking on the persona that the mask represented. Another participant (41) talked about expecting to see herself when looking in the mirror but seeing someone else instead. A third participant (52) talked about becoming the person in the mask because she could still see their body, and therefore there was a part of her 'in' the mask-character. A fourth participant (30) talked about feeling a change of identity, and that wearing a mask brought about the same kind of effect as wearing make-up: increasing her sense of confidence. A fifth participant (34) said that she had a definite sense of being a different person when wearing the mask.

Re-examining the data from the study in chapter six, it is interesting to note that this figure of 25 percent is not dissimilar from the percentage of participants in the previous study who gave one or more responses categorised under 2-(b) (a different person from who I usually am): 21.7 percent. This may be sheer coincidence, but it does suggest that there is some diachronic reliability in the assertion that a small but significant proportion of individuals do experience a noticeable transformation in their sense of self when seeing themselves masked. In the first study, this figure was somewhat smaller, with eleven percent of the participants having one or more text units coded under transformation/not-self. Given, however, that the mask used for this study was particularly character-less, and that participants were not seeing their masked appearance in a mirror, one would expect a lower frequency in these conditions.

With respect to the situational generalisability of these findings, it could be argued that the degree of transformation experienced by those participants wearing the mask in this study was so small --- particularly if one just looks at the difference between experimental group and control group on the first trial --- that it is unlikely to have any effect except under the most '"facially"-aware' conditions. There are four reasons, however, why the degree of transformation experienced in this study may have been lower than one might find in other contexts.

First, participants were only wearing the mask for a very short period of time: two minutes at maximum. By contrast, individuals who wear masks in carnival or theatrical contexts can be wearing them for hours on end, and this is likely to have a far greater impact. In the post-experimental interview, two of the participants made this point, saying that they may have felt a greater degree of transformation if they were wearing the mask for longer. This is not to suggest, however, that there will be a linear relationship between degree of transformation and length of time that the mask is worn. Based on the post-experimental discussions conducted in this thesis, it is tempting to suggest that the relationship may be more like an inverse 'U', with quite a marked feeling of difference at the beginning, a levelling-off as the individual gets used to being the mask-character, and finally a tailing away as the mask-wearer can no longer sustain --- or is no longer interested in being --- the character represented by the mask. Another possibility, however, is the kind of exponential relationship suggested by Caillois (1962), in which there is very little initial transformation, but with the beginnings of change comes a snowballing process that rapidly gathers momentum. Qualitative interviews with individuals who wear masks might be an effective means of developing a further understanding of the way in which the degree of masked-transformation changes over time.

A second reason why the degree of transformation may have been artificially low in this study is because, as with the study in chapter seven, it was based on a 'static facial pose' paradigm rather than a dynamic one. What was being looked at was whether the mask could initiate feelings of being like the mask character rather than modifying feelings that may have been more or less like the mask character; and, as the facial feedback research suggests, the latter is probably more likely to occur than the former. If similar masks were being used for subsequent studies, therefore, it might make sense to start with the participants doing something that was 'typically male' or 'typically female' --- for instance, acting in an aggressive manner --- and then seeing whether the different masks had different modifying effects.

This relates to a point made by Caillois (1962), and discussed in section 2.2, that masked-transformation in the 'real world' is probably a fundamentally dialectical process. The mask-wearer, for instance, starts to act out the mask-character, feels encouraged or aided in this

because they actually see themselves as that character, acts the character more, identifies more with the mask's facial appearance, etc. Hence, if one just looks at the effects of changes in the facial appearance in isolation, then the degree of transformation may be far less than if it was within the context of an on-going dialectic. This, again, though, is something that would require further empirical investigation.

A third reason why the actual transformation experienced when wearing a mask may be greater in the 'real world' is the fact that participants in this study actually felt more privately self-aware when wearing a mask, as compared with the non-masked condition. This seems likely to have happened because the experimental design was effective at stopping participants looking at their faces in the latter condition, whilst participants in the experimental condition could see what they looked like. However, from the self-awareness theory literature, it has been argued --- and shown (e.g. Johnson and Downing, 1979) --- that the lower an individual's private self-awareness, the more likely they are to be respondent to external stimuli: such as the mask they are looking at. Hence, the greater private self-awareness in the masked condition is likely to have reduced the participants' responsiveness to such cues as the mask's appearance.

However, given that participants in the masked+mirror condition were significantly more aware of their private selves than participants in the non-masked condition, there is the possibility that this may have increased the degree of transformation in some unspecified way. In future studies, it may be advisable to control for this by comparing a masked+mirror condition with a non-masked+mirror condition, to see whether the act of seeing oneself in a mirror was is in any way responsible for the greater transformative effect. The problem with such a comparison, however, is that participants in the non-masked+mirror condition, in contrast to participants in the masked+mirror condition, would be seeing the whole of their face. This could then bring in a host of other confounding factors: such as increased private self-awareness. There is also the problem of where one puts the mask in the non-masked condition: on the mirror to one side, or beside the participants' head such that they can see it in the mirror? Either way, this is again going to bring in confounding factors such that the control condition is not an exact match to the experimental condition.

A fourth reason why the transformative effect in the present study may have been artificially low is to do with an aspect of self-perception theory that Laird does not seem to address. This is the fact that, according to Bem (1972), a self-perception process will only occur to the extent that 'internal cues are weak, ambiguous, or uninterpretable' (Bem, 1972, p.2), and, 'the contingencies of reinforcement for engaging in the behaviour are made more subtle or less discriminable' (p.8). This is because, if internal or external cues are sufficient to account for a particular behaviour or physical appearance, then there is no reason for the individual to turn towards this behaviour or appearance as a source of evidence for self-attributions.

In the present study, therefore, where participants were clearly instructed to wear a mask, they may have attributed their transformed appearance entirely to this instruction rather than to anything specifically about themselves. By contrast, if the reasons why an individual wearing a mask were more ambiguous, then the extent to which they might make self-inferences on the basis of their masked appearance could be substantially greater. Exactly what this ambiguous situation might be is not easy to say: as clear internal cues would need to be avoided as well. However, it might be the kind of situation in which an individual 'just happens' to try on a mask and then catches sight of themselves wearing it.

Finally, with respect to corroborating the present findings, there is just one more alternative explanation that would be useful to rule out. In the present study, the experience of seeing a masked face was compared with the experience of seeing a mask with 'nothing' behind it. This leaves open the possibility, then, that the mask in the masked+mirror condition might have acted as a stronger visual cue. For instance, seeing the eyes behind the mask may have brought the mask to 'life', whilst the non-faced mask may have been experienced as inanimate and dead. Although this seems unlikely, given that the dependent measures very specifically assessed changes in <u>self</u>-perceptions [see section 7.4.1], in future studies it might be advisable to try and control for this effect. To do this, it would be necessary to compare a masked+mirror condition with a condition in which the participant was looking at an 'inhabited' mask: say a life-size photograph or a video of a masked individual. Again, however, such a comparison would bring with it a whole host of other confounding variable: for instance, seeing another face might raise the participants' levels of public self-awareness.

9.4.2 Hypothesis two: The wearing of a mask, under conditions in which an individual is aware that their face is no longer their 'face', will lead to a transformation away from the usual 'self' through a self-attributional process

The findings from this study showed that the wearing of a mask significantly reduced participants' ratings of how much they felt like their usual or normal self. Given the extremely low probability of this finding emerging by chance, it is unlikely that this was a false positive result as a consequence of the skewed distribution. However, as with transforming into the character represented by the mask, it seems likely that this finding was partially --- though not wholly --- due to demand characteristics. This is supported by the fact that a mean difference of just one point was found when only the first experimental and control conditions were compared.

In contrast to the findings that participants felt more like the character represented in the mask, however, the finding that participants felt less like themselves is more difficult to interpret in terms of self-perception theory. Although the measures specifically asked participants to talk about changes in their self-concept, participants may still have responded to these questions in terms of how usual or unusual they generally felt. This could have been brought on by numerous factors in the masked+mirror condition, such as the physical effects of wearing a mask, seeing oneself in a mirror, or seeing a face that was more 'alive' when it was being worn.

It is difficult to see how this problem can be overcome, other than developing even more direct question --- questions which would be in increasing danger of being over-complex. One might ask, for instance, 'In terms of how you perceive yourself, to what extent do you feel that your identity is the same as it usually is?' But such a question could easily confuse many respondents, and there is still no guarantee that participants who simply felt differently because they were wearing a mask would respond in the affirmative. Perhaps the best approach would, again, be to use a qualitative interviewing technique, in which these questions could be explored in more detail.

From the anecdotal data of the post-experimental interviews, however, there is some support for the fact that some participants did experience a more profound change in their usual sense of self when wearing a mask.

This is implicit in what a number of those participants quoted earlier said: for instance, experiencing a change of identity. One participant (44), however, talked more specifically about losing her sense of self completely when wearing the mask, and another (54) talked about feeling depersonalised and a bit anonymous. In contrast, though, one participant (33) talked about feeling more like herself in the masked+mirror condition, on the grounds that the male mask, which she perceived as a black mask, corresponded with her cultural identity.

Something else of interest that emerged from the post-experimental interviews was the ambivalence with which the masked-transformation --- both towards the mask and away from the self --- was talked about. No participants simply said, 'I didn't feel like myself' or 'I felt like the mask' when wearing the mask. Rather, some of them talked about knowing that what they were looking at wasn't them, and yet it 'was'. Or they talked about feeling 'strange' or 'confused' by seeing themselves in the mask: 'Is it me or isn't it?' This seems to be an important avenue for further research, because the sense of ambivalence or a feeling of being pulled in different directions seems most accurately to capture what many of the participants experienced when wearing a mask. Probably the best way to explore this would be through in depth qualitative interviews with individual who have worn masks in 'everyday settings', or even something akin to verbal protocol analysis in which individuals would be asked to talk about what they were feeling as they were actually looking at themselves wearing a mask.

9.4.3 Hypothesis three: Individuals high in public self-consciousness will experience a greater degree of transformation when wearing a mask than individuals low in public self-consciousness

The evidence in support of this hypothesis is somewhat mixed. On the one hand, significant transformations occurred only for participants high in public self-consciousness. However, this may well have been because the sample size for the high PBSC participants was almost twice that of the low PBSC participants. This uneven distribution almost certainly came about because participants were filling in their public self-consciousness scale whilst sitting in front of a mirror, and therefore would be likely to be more aware of their public selves than participants in the chapter four study (from where the median cut-off point was used). The fact that participants were filling in this scale soon after arriving in the experimental environment, rather than at

the end of a study, may also have meant that they felt more self-conscious and aware of how they were appearing.

Furthermore, a comparison of the means shows that there was not a notable difference in the degrees of transformation experienced by participants high and low in PBSC. Indeed, with the 'different from mask' variable, participants low in PBSC experienced a greater change in the predicted direction than participants high in PBSC. This makes it very difficult to conclude that participants high in public self-consciousness are more likely to experience a transformation when wearing a mask than participants low in public self-consciousness. What might be more appropriate to conclude is that there is evidence that participants high in public self-consciousness experience a transformation when wearing a mask, whilst there is not yet evidence that this is also the case for participants low in public self-consciousness.

In future studies, it would be advisable to include public self-consciousness as a between-participants factor in the analysis of variance or as a covariant. This would provide a more unified and powerful analysis of the role of public self-consciousness; and, as a between-participants factor, it would also be possible to look at the interaction between public self-consciousness and other independent variables. The strength of such an approach, however, is also its weakness: with an increasing number of between-participants factors, the results become increasingly difficult to interpret. Indeed, such is the complexity of this kind of analysis that, when attempts were made to introduce PBSC as a between-participants factor into the current analysis, SPSS consistently crashed! If PBSC was introduced as a between-participants factor in future studies, therefore, it would be useful to minimise the number of other dependent and independent variables.

9.4.4 Other Findings

If levels of public self-consciousness can not really explain why some individuals experienced a transformation when wearing a mask whilst others did not, what can? This was a question that became of increasing interest as this study progressed. What was perhaps most striking from talking to the participants in the post-experimental debriefing was the diversity of experiences that they reported as a consequence of seeing themselves in the mask. Whilst some talked about feeling totally different, others would simply say: 'Well, I was just wearing a

mask, wasn't I!' and would be quite incredulous at the possibility that some people might actually feel different as a consequence of 'just' putting a mask over their face.

Aside from PBSC and the self-/situationally-cued dimension, there are a number of other individual difference variables that might relate to the effects of wearing a mask. One possibility, as suggested by Jennings (1990), is that those with higher ego strength are more able to allow themselves to 'transform' when wearing a mask. Alternatively, the degree to which an individual feels transforms when wearing a mask might be related to how easily she finds it to shift from one sense of self to another, and it might be very interesting to see whether individuals high on 'self-pluralism' (Altrocchi, 1999) experience a greater degree of transformation when wearing a mask than those who are low on self-pluralism. A final possibility is that some individuals may make greater inferences about their private self on the basis of their public self (i.e. 'I am what I look like' versus 'What I look like is irrelevant to who I am'), such that they will experience a greater degree of transformation when wearing a mask.

Alternatively, the different degrees of transformation may not be so much due to individual differences as the relationship between an individual and a particular mask. If, for instance, an individual feels an affinity with a particular mask character, then they may be more inclined to take on its identity. How an individual feels in a particular situation is also likely to make a difference: if they feel relaxed, for instance, then they may feel more able to let themselves 'go with' the character.

From talking to the participants in the previous three experimental studies, however, what seems to characterise 'transformed' participants as compared with 'non-transformed' participants is that the former group tend to 'see' the mask as their 'face', whilst the latter group tend to see the mask as something quite separate or distinct from them. This did not seem to be a deliberate or conscious interpretation of what they were looking at, but an almost immediate reaction to seeing their masked 'face': some responding with 'Whoa... that's a totally different person', and others with simply 'That's me in a mask.' Why these differences in perception should come about is not clear. Perhaps it is something to do with imaginativeness or creativity, or perhaps it is something to do with how well-acquainted individuals are with their facial appearance.

Finally, it should be noted that there are some significant findings from this study which had not been anticipated. Wearing a mask seemed to make participants feel more aggressive, masculine, and childlike, and also less assertive, feminine, sympathetic, and affectionate. Whether these findings are related to the specific masks used in this study, or whether they can be extended to masks in general is not clear, but it might be interesting to follow up these findings. Also, participants looking at the female mask seemed to be much less aware of themselves than participants looking at the male mask. This may have come about because the female participants felt more self-conscious feeling 'watched' by a male face.

9.4.5 General Methodological Issues

With respect to synchronic reliability, it is unfortunate that a more formalised method of obtaining qualitative data was not used in this study. Although the aim of this study was to ask a small number of very specific questions, the post-experimental interviews show that, even here, qualitative data would have been a useful means of triangulating the findings and gaining a deeper understanding of the processes that were going on. In terms of further research, all the questions raised in this discussion point towards the need to conduct more in-depth, qualitative interviews as a means of developing an understanding of how and why individuals feel different when they wear a mask. This could be part of an experimental research program, as in chapter four. Alternatively, it might be appropriate at this point to broaden out the research base by conducting qualitative interviews in more naturalistic, non-experimental settings.

In terms of diachronic reliability, the findings from this study triangulate well with the findings from studies four and seven: showing that an individual's sense of self can be transformed through the wearing of a mask. Furthermore, there does seem to be some diachronic reliability to the finding that it is only a certain proportion of individuals who experience a change in how they perceive themselves as a consequence of mask-wearing.

However, with the findings from this study, the possibility exists that they have been contaminated by experimenter-expectancy effects. Every attempt was made in this study to reduce face-to-face contact between

experimenter and participants and to allocate participants to between-participant conditions at the last moment, but there is still the danger that some contamination may have occurred. What effect this had is impossible to judge from these data alone. Ideally, more than one experimenter could be used, as a means of seeing if there are any significant differences attributable to experimenter expectancy. However, given that the findings from this study triangulate well with the findings from chapter seven, in which there was virtually no researcher-participant contact, this suggests that the transformative effects witnessed in this study can not be wholly attributed to an experimenter-expectancy effect.

Another weakness in the internal validity of this study may have been to ask participant how they were feeling 'now' rather than how they were feeling when drawing the mask. As discussed, this was done to speed up the experimental process, so that participants would not have to think back on their experiences but respond in the immediate moment. However, by responding in the 'now', there was no guarantee that participants in either condition were actually looking at the mask, or that they were looking equally in both conditions. Given that participants would almost certainly have been looking at their masked faces more when drawing their face than when filling in the questionnaire, this may have served to reduce the degree of transformation that participants experienced in both conditions. Also, speeding up the scoring process may have back-fired in the sense that participants consequently rated their experiences less carefully --- thus bringing about the noted loss of inter-item reliability.

Another issue is the somewhat pervasive floor and ceiling effects in the participants' responses to the dependent variable items. This may partly have been a consequence of using a scale with a smaller range than in previous studies, but it seems likely that even with a nine-point or eleven-point scale there would still be something of these effects. Another alternative, then, might be to try a 'slash scale' from one to hundred, to give participants as much scope to respond as possible. Alternatively, perhaps some kind of ordinal scale, in which participants were asked to say in which of the two conditions they felt more like the mask character would have been more appropriate. Such an approach could also be used with more than two conditions --- for instance, small group, large group, mirror, etc. --- in which participants could order each of the conditions from 'most' to 'least' 'like mask'. This could then be analysed non-parametrically.

With respect to population validity, along with the fact that all participants were Open University students, all participants in this study were also women. It is difficult to assess the extent to which this may have interacted with the independent variables, as with the previous studies there have been too few male participants to identify any differences in the way that the different genders respond to wearing masks. However, in subsequent studies it would be an idea to try and find a sample source in which there are equal numbers of men and women, such that any gender differences in responses to wearing a mask can be more effectively investigated.

In terms of catalytic validity, it was somewhat surprising to find, from the post-experimental interview, that participants seemed to enjoy this experimental paradigm more than the two previous ones. Around fifty percent of the participants said that they found the study interesting or very interesting, and a number of participants stayed on for fifteen minutes or more to talk through the experiment and their thoughts on the effect of wearing a mask. Perhaps this was because the aims of the study were actually clearer this time, and therefore participants found it easier to engage and respond to the question regarding the experimental hypotheses. The use of a debriefing sheet also probably gave participants something more solid from which they could share their own thoughts. The greater enjoyment of the study might also have been to do with the use of a drawing task, which most of the participants seemed to enjoy. In fact, this approach proved to be both an effective and interesting means of getting participants to focus on their 'facial' appearance, and is a strategy that could be modified for use in other studies looking at the effect of appearance on self-concept or affect. Finally, the greater 'warning' that was given may also have given participants a sense of feeling safer, and that they were not being asked to do anything they did not want to.

At the same time, there is the danger that this 'warning' may have given participants the expectation that something substantial was about to happen when they put on the mask. This may then have biased the results. To avoid this, the wording, 'some people don't like <u>working</u> with masks,' was used, so that this warning could equally apply to the condition in which individuals were looking at the mask. The possibility still exists that some participants may have read 'working' as 'wearing' rather than 'looking at', but this potential bias seems

unavoidable, unless one were to remove some of the ethical safe-guards.

With respect to catalytic validity and ethical issues, it also proved valuable in this study to invite those participants who described feeling uncomfortable to talk about whether or not they had a sense of 'having' to complete the study. The finding here was that these participants were fully aware that they could leave the study at any time, but that the feelings of being uncomfortable were not at the point where they wanted to exercise that option. In future studies, it seems essential to include this line of questioning as part of the debriefing process.

9.5 SUMMARY

The findings from this study show that the wearing of a mask, under conditions in which an individual is focused on that mask's appearance, significantly increases the extent to which an individual feels like the character represented in the mask, and significantly reduces the extent to which an individual feels like their usual self. This is evident in both the quantitative and anecdotal qualitative data. This confirms the findings of the chapter seven study: that the wearing of a mask, under conditions of high 'facial' focus, can have a transformative effect.

Furthermore, given that the design of this study minimised the possibility that this transformative effect was due to the cueing effects of seeing the mask, or due to physiological feedback processes, the findings from this study strongly suggest that the wearing of a mask can bring about a transformative effect through a self-attributional process. Not only is this finding of relevance to an understanding of the psychological effects of wearing a mask, but it also provides substantial support for Laird's (1974) self-attributional hypothesis.

In terms of individual difference, these findings show that a transformative effect is present in individuals with high public self-consciousness, but not necessarily in those with low public self-consciousness. However, a comparison of the means between these two groups suggests that further research is required on this individual difference measure.

CHAPTER TEN: DISCUSSION

As the final chapter in this thesis, this discussion will look at the theoretical and applied implications of the present research. It will then go on to consider areas for further empirical investigation.

10.1 THEORETICAL IMPLICATIONS

Theoretically, the research conducted in this thesis has substantial implications for both an understanding of the psychological effects of wearing a mask, and also for an understanding of wider psychological and social psychological processes.

10.1.1 Theories of the Mask's Psychological Effect

In terms of the hypotheses mapped out in chapter two, the findings of this thesis are of considerable importance. At the most general level, what the current research shows is that the psychological effects of wearing a mask are far more complex than had previously been thought. The causal network in appendix 2a --- which is no doubt incomplete in itself --- demonstrates just some of this complexity.

Within the literature on the mask's psychological effect --- and also within much lay-thinking --- the most commonly held assumption is that the mask disinhibits its wearer. At a general level, the findings from this study strongly challenge this assumption. Not only is there no empirical evidence within the literature to support this assertion, but the empirical findings from the present thesis suggest that the wearing of a mask does not have an overall disinhibiting effect. Indeed, there is evidence to suggest that the mask is as capable of inhibiting its wearer and it is of disinhibiting her.

This is not to suggest that an individual can not feel less inhibited when she wears a mask. The present studies show that this can occur. But for an individual to feel less inhibited when wearing a mask, she must want to behave in a way that she would normally inhibit out of a concern for some facet of her mask-able public self.

This facet may be the individual's facial identity. In this respect, there would seem to be some truth in the

assumption made by numerous authors --- as well as by a notable proportion of lay-people --- that the mask can reduce its wearer's inhibitions because it reduces her identifiability. However, the findings from this study suggest, again, that the relationship between reduced identifiability and reduced inhibitions is much more complex than has previously been thought.

Within the literature, it is generally assumed that an individual simply feels less identifiable when they wear a mask. The research in this thesis shows that the wearing of a mask can significantly reduce an individual's feelings of identifiability. However, the theoretical exploration carried out in this thesis suggests that this will primarily occur to the extent that the mask-wearer's identifiability is dependent on immediate facial recognition. Hence, there may be many situations in which an individual does not feel less identifiable when they are wearing a mask.

Even in conditions where an individual does feel less identifiable behind a mask, there is no reason to conclude from this that they will then behave in a less inhibited manner. Not only does the individual need to want to behave in a way that they would normally inhibit for fear of being identified, but they must also believe that some punishment or censure will happen should that identification occur.

What this suggests, then, is that the kinds of situations in which masked-anonymity has a disinhibiting effect is probably much more limited than has been previously assumed. If an individual wants to behave in a way for which they know they will be socially sanctioned, then the wearing of a mask might be one means by which they could lessen their concerns. However, in situations in which individuals wear masks for reasons other than to facilitate disinhibited behaviour --- for instance, as part of the 'dressing up' for a carnival --- then wearing a mask is unlikely to have much of a disinhibiting effect.

With respect to the theories of disinhibition reviewed in chapter two, the findings from this thesis lend most support to the hypothesis advocated by MacGowan and Rosse (1924). Some individuals do seem to be concerned with the 'sensitive jelly' of their face --- looking awkward, uncomfortable, embarrassed, etc. --- and when their faces are covered by a mask, these concerns are lessened. Consequently, they can then behave in ways that they would normally inhibit out of these public self concerns.

However, the findings from this study extend MacGowan and Rosse's analysis by pointing out that it is only particular individuals in particular situations who experience a reduction in these concerns. Hence, even MacGowan and Rosse's theory has been shown to be somewhat over-generalised.

The findings from this study also lend some preliminary support to other theories of masked-disinhibition. It would seem that some individuals do feel more detached from their behaviour and appearance when wearing a mask, and this may lead to the kind of dramatic distancing processes identified by Jennings (1990) and others. Also, the findings from this study show that individuals do perceive a target individual differently when that individual is wearing a mask. If it is assumed that mask-wearer's may sometimes be aware of this fact, then a disinhibiting effect may emerge through the dramatic licensing process outlined by Brook (1981) and others.

This thesis has also identified three further reasons why a mask might disinhibit its wearer, none of which have been previously identified in the literature. The first of these is that, because the mask limits the wearer's vision, she may not be able to see others as well. Consequently she may be find it easier to treat others in a less personalised and humane way. Second, it is possible that a mask-wearer may develop a character based on her conception of the kind of person who might wear a mask: i.e. someone who is 'snooping', risk-taking, or with something to hide. Third, observers may find it easier to treat a masked individual in a less inhibited way because they can not see that person's facial identity or facial emotions. This might then induce the mask-wearer, herself, to behave in a less inhibited way, with the possibility of an on-going positive feedback cycle.

The findings from this thesis also show that previous literature on the psychological effects of wearing a mask has been highly imbalanced in that, whilst much has been written about the mask's capacity to disinhibit its wearer, there is virtually no mention of the mask's equivalent capacity to inhibit its wearer. This inhibiting effects seems to occur primarily when an individual wishes to behave in a way for which they require mask-able aspects of their public self, and there is a substantial degree of diachronic reliability to this finding. This may be a situation in which an individual wishes to use their face to express emotions or to communicate non-verbally, to develop an improvised

character, or to establish some intimacy with their observers. The findings from this study also show that some individuals find the wearing of a mask physically uncomfortable or unpleasant. This may, again, lead to feelings of inhibitedness.

The findings from this thesis also raise some important questions about the hypothesis that the mask can transform its wearer. This thesis shows clearly, for the first time in the literature, that an individual can experience a significant transformation in their sense of self when wearing a mask. This is both in terms of feeling less like their usual selves, and also feeling more like the character represented in the mask. The research in this thesis also suggests that a mask will primarily bring about a transformation at a cognitive, self-perceptual --- rather than affective or behavioural --- level.

However, what this thesis shows, which has not been stated within the literature, is that the wearing of a mask will primarily bring about this transformation into the mask character when the mask-wearer is specifically focused on their 'facial' appearance. Where an individual is wearing a mask but is not specifically focused on what they look like, on the other hand, the evidence from this thesis shows that there is no significant transformation in the direction represented by the mask. However, there is evidence that they may still feel less like their usual selves.

As with the mask's ability to disinhibit its wearer, this finding suggests that the situations in which a mask brings about a transformative effect may be more limited than has previously been assumed. Certainly, it shows that Brook (1981) and others are wrong to suggest that the wearing of a mask, in itself, can bring about an immediate and dramatic transformation.

The findings from this study, however, do support the hypothesis advocated by Honigman (1977) that a mask transforms its wearer by transforming her 'facial' appearance. The findings also lend some initial support to Maude-Roxby's (1994) hypothesis that an individual will feel transformed when wearing a mask because it changes the way that her audience will respond to her.

From the research conducted in this thesis, two further reasons why an individual may feel transformed when wearing a mask have been identified, neither of which have been previously stated in the literature. The first

of these is that the mask may simply act as a visual cue, directing the wearer towards the particular affects or characteristics that it represents. The other possibility is that an individual may have a particular affective reaction to seeing themselves wearing a mask --- for instance, amusement, or thinking that they look ugly --- and this may bring about a transformation in the direction that the mask represents.

Finally, whilst there is clear evidence that the wearing of a mask has a variety of psycho-somatic effects, there is no evidence that it facilitates the expression of aspects of the wearer's Self. Whilst none of the studies in this thesis directly tested this hypothesis in an adequate way, there was very little evidence from the open-ended measures on three studies to suggest that this effect was occurring. On this basis, it would seem that, in most instances of mask-wearing, this expression of aspects of the Self is not a particularly prevalent occurrence.

10.1.2 General Psychological and Social Psychological Theories

Both the theoretical reviews and the empirical research conducted in this thesis has implications for a number of psychological and social psychological theories: most notably, theories of self-awareness and deindividuation (e.g. Prentice-Dunn and Rogers, 1982), and self-attribution theory (e.g. Laird, 1974).

With respect to the first of these, the present research suggests that Buss (1980) and others are correct to hypothesise that anonymous conditions can lead to a reduction in public self-awareness. Furthermore, contrary to the hypothesis put forward by Diener (1980) and Zimbardo (1969), this reduction in public self-awareness can come about even when the anonymity-manipulation takes place in an individual, rather than group, setting.

However, the findings from the present study suggest that the wearing of a mask, as an anonymity-manipulation, reduces public self-awareness in a way that neither Buss (1980) nor Prentice-Dunn and Rogers (1989) have entirely anticipated.

Like Buss (1980) and Carver and Scheier (1981) suggest, it would seem that the anonymity-manipulation of wearing a mask reduces an individual's public self-awareness because, by knowing that others can not see her face, the individual's own attention is drawn away from how she

looks. However, contrary to what these authors predict, it would seem that this reduction in public self-awareness is not global but related to the very specific aspects of the public self that are covered by the mask. To some extent, this finding raises questions about how global the reduction in public self-awareness is like to be under other conditions of anonymity. Contrary to what Buss or Carver and Scheier predict, it may be that manipulators of anonymity actually reduce public self-awareness in very specific ways.

The findings from this study also question Prentice-Dunn and Rogers' (1989) hypothesis that the wearing of a mask reduces an individual's concerns with how she presents herself because she is less concerned with retaliation or retribution from those observing her. The findings from this study suggest this process is possible, but that in many conditions of anonymity it is unlikely to happen.

The theoretical discussion in this thesis also raises some important criticisms of differential self-awareness theory, the most important of which does not seem to have yet been raised in the social psychological literature. This is the point that, by superimposing a motivational expectancy-value theory on an attentional theory of self-awareness, Prentice-Dunn and Rogers (1989) are in danger of disregarding the very attentional processes on which they attempt to construct their theory. The discussion in this thesis suggests that a reduced concern with punishment is just one way in which reduced identifiability may lead to a reduced concern with the public self. Subsequent research into this area might be advised to differentiate between reductions in public self-awareness as a consequence of motivational factors, and reductions in public self-awareness as a consequence of attentional factors. Such a distinction should make it easier to identify the conditions in which manipulators of anonymity will reduce public self-awareness.

As a final point regarding theories of disinhibition and self-awareness, the findings in this study provide an alternative explanation for the deindividuation effect that Zimbardo (1969) and others have described. It may be that the hooded participants in Zimbardo's study were more likely to give electric shocks, not because they felt beyond reproach or because they wanted to individuate themselves, but because they were less concerned with 'betraying their vulnerabilities' through their facial expressions. That is, hooded participants may have thought, 'No one is going to see me looking afraid or uncertain when I push this button, so I am not

so bothered about doing it.' In this respect, it would be very interesting to replicate the Zimbardo (1969) or Prentice-Dunn and Rogers (1982) disinhibition studies, but this time with the kind of post-experimental qualitative 'micro-analysis' that was conducted as part of the initial study in this thesis. This might show more exactly the processes by which this disinhibition comes about.

In terms of general psychological theories, the findings from the present study also provide strong support for Kellerman and Laird's (1982) assertion that attending to one's physical appearance can change the way that an individual sees herself. Furthermore, in contrast to previous self-attribution studies, the final study in this thesis controls for visual cueing effects. Hence, it shows that the transformation that changes in physical appearance bring about can not be attributed solely to external cues.

However, the findings from this study do not support Laird's distinction between individuals who are reliant on self-produced cues, and individuals who are reliant on situationally-produced cues. Indeed, the findings from this study suggest that the questionnaire items used to measure this dimension lack a significant degree of inter-item reliability. This is a difficulty that has not be mentioned --- or addressed --- in the literature, but one that is of substantial important if this individual difference dimension is to be explored further.

The findings from this thesis, and specifically chapter eight, also provide additional empirical support for the social psychological hypothesis that an individual's physical appearance will influence the kinds of psychological characteristics that are attributed to them (e.g. Hatfield, 1985). However, the results from the chapter eight study are quite unique, in that they show that these attributions are made even when it is clear that the individual's 'facial' appearance is not their real facial appearance. The value of this finding is that it then raises questions about how these other-attributions come about. If, for instance, other-attributions are made even when an individual's facial attributes are clearly not theirs, then this would somewhat challenge the hypothesis that a stereotyping process is responsible for these attributions (e.g. Synott, 1989). But if it is not stereotyping then how do these other-attributions come about? Perhaps further investigations of the psychological effects of seeing someone wearing a mask could provide some answers.

Finally, at the widest possible level, the findings of this study may say something significant about the relationship between an individual's internal, 'intrapsychic' world, and their external, physical being. As Merleau-Ponty (1962) states, within a mechanistic physiology, an individual's physicality is a mere object of consciousness, a shell within which their Cartesian 'I' resides. Yet, the findings from the present study suggest that one's external appearance is not just an object of consciousness, but an aspect of being which has the potential to fundamentally modify the most 'essential' aspects of one's 'inner' being: the sense of self. In this respect, the findings from this study highlight the need to move beyond a Cartesian internal/external split, and towards an understanding of the fundamental interdependency between the internal and external worlds.

10.3 APPLICATIONS

The findings from this thesis also have a number of implications for the practical use of masks, particularly within the fields of psychotherapy and personal development.

It is evident from this thesis that some individuals have concerns about mask-able facets of their public self. This includes concerns with looking awkward, looking silly, looking ugly, blushing, twitching, feeling that one's face is being 'read', or doing the 'right' face-work. It also seems likely that some people will have concerns with mask-able facets of the public self that did not emerge in the present research: for instance, stuttering, facial blemishes, or looking confused. In some cases, these concerns may be at a chronic level, where they interfere with the individual's day-to-day functioning. Given, then, that the mask has the potential to reduce these public self-concerns, there would seem to be considerable value in looking at the way in which masks might be applied to these difficulties.

Probably the most effective way of using a mask to address some of these chronic problems would be as part of a cognitive-behavioural desensitisation program. The aim here would not just be to get clients to the point where they can talk or interact comfortably with a mask on. Rather, the aim would be to use the mask as a 'stepping stone', so that clients can become comfortable talking or interacting with a mask on, and then gradually

move towards interacting without a mask. To make this desensitisation process even more gradual, clients could progress from full-face masks to half-masks, and then to eye-masks or masks that covered only very specific features of the face.

An example of this might be the use of masks with individuals suffering from social phobias, who had specific fears about being seen as facially awkward or facially embarrassed in public. Clients would be given full face masks to wear, and then encouraged to interact or role-play dialogues with other members of a therapeutic group. If this reduced the client's public self concerns, then in subsequent sessions the group members might be encouraged to continue with this activity, or to try it with masks that covered a smaller proportion of their faces. As a progression on from this, the group members could then be invited to interact mask-less for short periods of time --- with the proviso that they could put their masks back on the moment they felt uncomfortable. Finally, participants could be invited to interact without the masks for increasingly extended periods of time, until they reached a point where they no longer required the mask to interact comfortably.

The mask's ability to reduce specific public self concerns could be applied to a wide variety of settings: non-clinical as well as clinical. For instance, a men's personal development group which aimed to help participants develop their emotional vocabulary (e.g. Cooper and Baker, 1996) might note that participants tended to inhibit the expression of more 'negative' affects out of a concern for being seen to cry or look vulnerable. If this were the case, then the wearing of a mask might again serve as a useful 'stepping stone', helping the men to feel more comfortable expressing these feelings, before going on to express them without the mask on. If drama students had concerns about looking 'too' facially emotional, the wearing of a mask might also be a very useful means of helping them to express the full emotional repertoire of their characters.

The mask's ability to transforms its wearer's sense of self also indicates some very significant applied possibilities. Few other phenomenon have been shown so consistently to transform an individual's self-concept, and this suggests that the mask may have a unique place in the psychotherapeutic arena. However, for the mask to transform its wearer's sense of self in the direction that it represents, it would seem essential that the mask-wearer is presented with regular opportunities to

reflect on how they look: ideally through mirrors. If mirrors are not present and the mask-wearer has no reason to focus on their appearance, then the mask's transformative potential is likely to be fairly limited.

One of the therapeutic approaches that might be most enhanced through the transformative power of a mask-and-mirror technique is that of role-plays: for instance, personal construct therapy's 'fixed role' technique (e.g. Fransella and Dalton, 1996). The aim of such a role-play is not to permanently transform the individual into their role. Rather, the purpose of the fixed role enactment

> is to get over the idea that we can indeed, change ourselves; that even the client can change, though he seems so stuck at the moment. He learns about self-inventiveness; he learns what happens when he alters a particular item of behaviour, and whether it is useful to explore this line of inquiry further or whether he should try something else. He discovers how the way we construe others and behave towards them influences how they behave towards us. (Fransella and Dalton, p.160)

Most likely masked fixed role enactment could not be conducted outside of the therapeutic environment. However, a masked 'mini' fixed role could be carried out within a therapeutic relationship or therapeutic group, as a means of achieving the goals identified by Fransella and Dalton (1996). For instance, a client might be asked to make a mask of a desired personal quality, or they might be asked to make a mask of a quality that is orthogonal to their current constructs (e.g. 'assertive' rather than 'aggressive'---'submissive'). Having made the mask, they could then be invited to look at themselves in the mask, adopt the character of the mask, and then interact with those around them. As Fransella and Dalton (1996) suggest, not only could this help the client realise that they can change (self-concept as well as behaviour), they would have an opportunity to see how it feels to adopt a particular identity and set of behaviours, and also to see how others respond to them when they behave in this manner.

Such a masked-experimentation with different roles and polarities would also be appropriate to some of the more humanistic psychotherapies, such as gestalt psychotherapy (e.g. Perls, 1975). With respect to a more person-centred approach (e.g. Rogers, 1959), the transformation of self-concept that the wearing of a mask brings about could

also be of substantial value, but in a somewhat different way to that of fixed-role play. From a Rogerian perspective, the primary barrier between an individual and the actuality of their pre-reflective lived experience is a 'sedimented' self-construct (Spinelli, 1994). Hence, through reducing the salience of this self-construct by wearing a mask, a client may have an opportunity to experience their lived-world in a more open and fluid way. Another Rogerian approach might be to ask a client to make a mask of their 'self', and then a mask of something which is not part of their 'self'. By seeing themselves wearing this 'not self' mask, the client may then have an opportunity to identify with and experience aspects of their lived-world that they would normally deny or distort out of an incongruence with the sedimented self-construct.

With respect to other humanistic approaches, such as transactional analysis (Berne, 1961) or psychosynthesis (Assaglioli, 1975), a similar approach could be used to help clients embody --- and subsequently reflect upon --- less accepted facets of their organismic totality: such as 'ego-states' or 'subpersonalities'. Furthermore, because of the malleability of the mask, it may be a very effective means of helping clients to represent and access 'parts' of the Self that can not so easily be represented through language or drawings. For instance, an enormous judge's mask could be used to represent an over-bearing critical parent ego-state (Cooper and Cruthers, 1999).

For these approaches to be successful, however, it would seem essential that the client's mask is one that she has made --- or at least chosen --- herself. This is because there is no evidence from this thesis to suggest that the wearing of a mask, in itself, will facilitate the expression of aspects of the wearer's Self. Hence, it is only if a client chooses to express a self-aspect in a mask, or if she unconsciously 'projects' a part of herself into a mask that she is making or looking at (e.g. Jennings and Minde, 1993), then the wearing of this mask may allow her to embody this 'part' of her-self.

The findings from this thesis also suggest that mask-work may be a very useful means of helping drama students to learn to fully 'enter into' their characters. However, as Johnson (1980) suggests, it may be that, for this to occur, the presence of mirrors is required to help the students 're-charge' their mask.

Along with indications of how mask-work might be applied to a therapeutic or dramatic setting, the current research suggests that there are some important contraindications of mask-work. The wearing of a mask would not seem to be particularly useful in contexts where individuals will want to use mask-able facets of their public self. This might be a drama student who wants to use their face to develop a fluid and flexible character, or where a therapy clients wants to develop closer relationships with their therapist or group members.

With respect to psychotherapy, it is also important to note that some of the experimental participants found it uncomfortable or claustrophobic to wear masks. Hence, it would seem important that any practitioner should be cautious in inviting clients to wear masks, and it may be that a gradual development from eye-masks to half-masks to full masks could be the most appropriate way of introducing clients to mask-work. Also, given the mask's ability to transform its wearer's sense of self, it would seem essential to be very cautious in using the mask to facilitate an individual's self-transformation. If an individual has an uncertain or unbalanced sense of self prior to wearing a mask, then prolonged exposure to seeing themselves with a new 'face' might be experienced as somewhat confusing, disturbing, or de-personalising.

10.4 FURTHER RESEARCH

The findings from this thesis have opened up numerous avenues for further research. Chapter two, in itself, should serve as a valuable starting point for a psychologist interested in exploring the ways in which a mask might affect its wearer. In the theoretical discussions, too, a number of questions have come up which there has not been sufficient space in the present thesis to explore. For instance, there is the question of whether the wearing of a mask increases a sense of social identity where an in-group and out-group are physically separated (section 3.2.2.3.4); or the question of whether there are gender differences in how individual's respond to their physical appearance (see section 6.1.4). The discussions at the end of each study have also suggested several different ways in which this research could be taken forward. In this final discussion, therefore, I will only identify the avenues in which further research would be most warranted.

With respect to the question of the mask's psychological effect as a whole, it would be extremely useful to begin conducting in-depth qualitative interviews with individuals who wore masks in 'everyday' contexts --- e.g. drama, psychotherapy, fencing --- to see if the findings from such a study would triangulate with the findings from the more non-naturalistic, experimental studies conducted in this thesis. The nodal hierarchy developed in chapters four and five could be used to structure the resulting data, and to see whether similar or very different effects were experienced when individuals wore masks in non-laboratory environments. This would be particularly important in assessing whether a masked transformation can come about in situations other than when an individual is directly looking at their masked appearance. Not only would such an approach be able to assess the ecological validity of the present findings, but it would also be a very effective means of obtaining a clearer and more in depth understanding of how these effects come about. Such an approach might also identify other effects of wearing a mask that have not, to the present date, emerged.

Two pilot studies along these lines were, in fact, conducted. The first of these was with a middle-aged man who had just begun to use masks as part of his drama training, and the other was with a middle-aged man who used masks as an integral part of his sexual practices. As predicted, the findings from these two in-depth interviews confirmed some of the present findings, but also opened up a number of further areas of inquiry. Both men, for instance, talked about feeling like a very different person when wearing the mask, but the second interviewee talked in detail about the ambiguity of this transformation: the sense of 'me-but-not-me'. Also, this man talked about the way in which wearing a mask very much increased his private self-awareness, and cut himself off from the over-stimulation of the external world.

With respect to the psychological effects of wearing a mask, it would also be very worthwhile to look more closely at the question of individual differences, in an attempt to understand why it is that individuals respond to the wearing of a mask in such markedly different ways. With respect to differences in degrees of transformation, one way forward would be to repeat the chapter nine study, but present participants with a wider range of individual difference measures, such as the self-plurality scale (Altrocchi, 1999). Post-experimental qualitative interviews, like those conducted at the end

of the chapter four study, might also be an effective way of obtaining a deeper understanding of the factors which bring about a transformative effect.

To see whether the individual differences come about because some people see their 'face' as the mask and others see it as their face, it would also be useful to introduce as a dependent measure an item like, 'To what extent do you think that your facial appearance has changed?' Alternatively, one could compare two groups of participants, one of whom would be asked to just wear a mask, and one of whom would be asked to wear a mask but to think about how they looked to others. Alternatively, this second group could be asked to imagine that their mask was their 'real' face, to see whether it was this 'facial' transformation factor which was the key precedent to psychological transformation.

With respect to individual differences, it also seemed clear that some individuals have greater concerns about mask-able aspects of their public self than others. Another very valid area of further research, therefore, would be to develop the 'facial self-consciousness' scale, to see whether it was possible to identify individuals who were more concerned about how their face appeared, and therefore would be likely to experience a greater reduction in public self concerns when wearing a mask. In terms of the clinical applications of mask-wearing, the development and testing of such a questionnaire would be very useful in terms of seeing what kinds of people, or what kinds of concerns, the wearing of a mask might be most effective in treating.

To develop this line of research, the next step could be to 'brainstorm' as many further 'facial self-consciousness' items as possible, focusing more specifically on the kinds of concerns people might have about their face. For instance, 'I worry about people "reading" things into my facial expressions' or 'I'm concerned about looking miserable'. An alternative approach might be to conduct a survey asking people questions like: 'What aspects of your facial appearance concern you when you are communicating with others'. Once a number of items had been developed, a questionnaire study could then be conducted to assess the degree of inter-item reliability. Those items which demonstrated a sufficient degree of reliability could then be used to develop a fuller 'facial self-consciousness scale'.

Another area for further research is the question of how situationally generalisable the present findings are

regarding the transformative effects of wearing a mask. As suggested above, this question could be addressed through qualitative interviewing. Alternatively, one could use a more experimental method. For instance, one could design a number of different conditions --- for instance, wearing a mask in front of a mirror, wearing a mask in front of a large/small group, wearing a mask with very small eye-holes, looking at a mask for a long period of time before putting it on --- and then ask participants to rate (or order) how much they felt like the character represented in the mask in each of these conditions, and how much they felt like their usual selves. A series of experiments along these lines would be a very useful way of clarifying what situational factors were necessary for an individual to feel more like the character represented in their mask, and also what situational factors were necessary for an individual to feel less like their usual selves.

In relation to more established psychological theories, the most useful direction for further research would also probably be in the area of self-attribution theory. In some respects, the wearing of a mask provides a crucial test of Laird's (1974) self-attribution explanation for the facial feedback effect, because it is one of the few phenomenon which can radically alter an individual's 'facial' appearance without altering their face. In this respect, it is an ideal tool for seeing whether a facial feedback effect can occur in the absence of any physiological facial feedback. The research in this thesis provides good support for Laird's analysis, but it would be useful to triangulate these findings with a study that controlled more fully for demand characteristics. This could be done through increased automisation, using a between-participants design, and embedding the dependent measures in some kind of 'cover story', such that the participants would not be aware that the study was looking at transformative effects.

Conducting in-depth qualitative interviews at the end of a study similar to the chapter nine study would also be a very effective way of assessing the diachronic reliability of the present findings. More directly, one could simply give participants a number of masks, ask them to try them on in front of a mirror and describe what they are experiencing. Interestingly, this deception-less, straightforward design seems to be the direction that Laird, himself, is moving towards (see Laird et al, 1994).

10.5 CONCLUSION

In conclusion, this research shows that a mask can have a significant psychological effect on its wearer, and that there are many different pathways by which this effect can come about.

This thesis shows that, under conditions in which an individual's identifiability is dependent on immediate facial recognition, the wearing of a mask can significantly reduce feelings of identifiability. It also shows that under these conditions, a mask-wearer feels significantly less concerned about mask-able aspects of her public self. Findings from this study also show that a mask can both disinhibit and inhibit its wearer, depending on whether the mask-wearer wants to behave in a way that she would normally inhibit out a concern for mask-able facets of her public self, or in a way for which she requires mask-able facets of her public self, respectively.

This thesis also provides very clear evidence that, under conditions in which a mask-wearer is focused on her 'facial' appearance, the wearing of a mask significantly reduces the extent to which she feels like her usual selves and significantly increases the extent to which she feels like the character represented in the mask. There is also strong evidence to suggest that this comes about through the self-attribution process proposed by Laird (1974) and Kellerman and Laird (1982). Indeed, the present studies provide some of the strongest support for this hypothesis.

Kellerman and Laird (1982), therefore, would seem to be correct to suggest that, 'we redefine ourselves each time we attend to our attributes,' and that, 'a seemingly innocuous change in our appearance can change the way we feel about ourselves' (p.312). Not only may the psychological effects of wearing a mask be the clearest demonstration of this, but it may also be one of the most effective ways of extending this theory into clinical practice.

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