

EXPECTATIONS OF PLASTIC SURGERY AND
THE ATTRIBUTIONS ASSIGNED TO A FACIALLY DISFIGURED PERSON

BY

ROBIN ANNE ADKINS

A Thesis Submitted to the
Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF ARTS

Department of Psychology
University of Manitoba

Winnipeg, Manitoba
March, 1987



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ISBN 0-315-37313-X

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Acknowledgements

I wish to thank Dr. Ross Hartsough for serving as my advisor. His support and guidance were greatly appreciated.

I would also like to thank the members of my committee for their continued interest in the research. Dr. Dan Harper for his helpful comments on research design and analyses and Dr. Fred Marcuse for his insightful and thought-provoking comments.

I would also like to express my appreciation to the University of Michigan Burn Centre in Ann Arbor, Michigan, and especially Leora Bowden, for obtaining the slides used in this study. Also, my thanks goes to the women who allowed me to use slides of them in my research. I hope others may benefit from their willingness to participate in research.

I would also like to thank all my family and friends for their emotional support and practical help and advice.

Finally, I would like to thank Christopher whose continued love and belief in my ability helped me overcome all obstacles. I would also like to thank him for his willingness to come to my aid whenever possible.

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ABSTRACT

The purposes of this study were to examine people's expectations of plastic surgery and to consider how people in general react to a person who has been facially disfigured through a burn injury. One hundred and ninety-six undergraduate subjects were recruited to test three specific hypotheses.

The first hypothesis considered people's expectations of plastic surgery. Subjects completed an Expectations of Plastic Surgery (EPS) scale. The mean of all subjects' scores on the EPS scale compared with the theoretical mean of this scale for a population who knew that appearances could not be further improved through surgery ($M=2$). This population mean of 2 also represented a realistic appraisal of the benefits of plastic surgery for the person presented. Results indicated that the population mean of two does not fall in the 95% confidence interval constructed around the sample mean of 9.92. This suggests that people do hold high or unrealistic expectations of plastic surgery.

The second hypothesis proposed that as the responsibility assigned to the disfigured person for her deviant appearance increases, the evaluation of that person will become more negative. To test this hypothesis, the independent variable

of information given to the subjects was divided into 4 levels. These 4 levels were; (1) subjects informed that no further plastic surgery is possible, (2) subjects informed that person has discontinued surgery due to internal reasons, (3) subjects informed that person has discontinued surgery due to external reasons, and (4) subjects given no information concerning surgery received or yet available. The dependent variables were the subjects' responses on four measures; (1) the Social Stimulus Value scale, (2) the Impressions scale, (3) a Semantic Differential scale, and (4) a behavioural measure. An one-way MANOVA indicated a significant difference. Results of follow-up tests were complex but generally suggested two findings. First, when subjects were given some information about the disfigured person's plastic surgery history they rate her more negatively than when no information was presented. This finding was unexpected, but could occur because subjects with no information may feel a greater need to compensate the victim through a positive evaluation than those subjects who were informed that some plastic surgery, or compensation, had already occurred. This explanation is based on the Just World Hypothesis (Lerner and Simmons, 1966; Lerner and Miller, 1978). The second finding was that when subjects hold the disfigured person more responsible for her deviant appearance, they assign more negative attributions to her.

The third hypothesis proposed that people with high positive expectations of plastic surgery would assign more negative attributions to a disfigured person than people with lower expectations of plastic surgery. Three levels of the independent variable (expectations of plastic surgery) were arbitrarily created based on scores on the EPS scale. These three groups represented; (1) low expectations, (2) moderate expectations, and (3) high expectations. Scores on the dependent variables (Social Stimulus scale, Impressions scale, Semantic Differential scale, and behavioural measure) were compared for these three condition. It was found that as expectations of plastic surgery increased, the attributions assigned to a disfigured person became more negative.

INTRODUCTION

Despite an outward attempt on the part of most people to be understanding and accepting of a person whose appearance has been disfigured through a burn injury, most people cannot help but to react with shock, horror or pity. Limited comprehension of the restorative powers of plastic surgery and tendencies to assign responsibility to burn victims for their appearance may contribute to people assigning negative attributions to those people with disfigurements, in particular facial disfigurements.

It may be that a belief exists that any abnormalities in a person's appearance may be reduced or eliminated through surgery. Yet, this is not an accurate appraisal of the powers of plastic surgery. Although plastic surgery may be able to noticeably alter or improve a person's appearance, it is unrealistic to expect that in all cases, the deviant appearance can be altered to conform with the idealized norms of society. The appearance of the disfigured person may still be deviant despite surgical interventions, a fact that people in general may not recognize and accept. They may believe the disfigured person has elected not to benefit fully from plastic surgery.

It has been demonstrated in the literature that when people believe that an individual has made a decision or is responsible for the situation s/he is in, then they are more likely to assume that there are characteristics about that individual that causes her/him to make that decision (Lerner and Simmons, 1966; Walster, 1966; Shaw and Sulzer, 1964; Lerner and Miller, 1978; Fincham, 1982; Sadow, 1983). People may be more likely to blame the victim for her/his appearance and they may assume that in some way that person deserves what has happened to her/him. This assumption would likely effect people's attitudes and behaviour towards the disfigured individual. Thus, it seems possible that the more responsible people hold a disfigured person for their deviant appearance, the more negative will be the attributions that they assign to that person.

If people do hold unrealistic expectations of reconstructive surgery they may assign negative attributions to the disfigured person because they believe that more can be done to improve her/his appearance. It may not be uncommon for people to wonder why the disfigured person does not do something to correct the physical anomaly, not realizing the limitations of treatment. The naive belief of the restorative powers of reconstructive surgery may lead people to think that the disfigured person has, for some reason, made the decision not to improve appearances. Their logic may be that there must be "something wrong" with this

person that s/he would decide to remain deformed and deviant from the standards of society.

The purpose of this literature review is to consider these issues through an examination of previous research and to assess the probability of the hypotheses that; (1) people do have unrealistic views of reconstructive surgery, (2) that as the responsibility assigned to the disfigured person increases, the characteristics attributed to that person will become more negative, and (3) that people who hold high, unrealistic expectations of plastic surgery will tend to assign more negative attributes to the disfigured person. If the first hypothesis is supported, then the misinformation regarding reconstructive surgery that people possess could lead them to assume that the person has decided to remain disfigured even when this is not the case, and could lead to the attribution of negative qualities to the facially disfigured person. That is, the person will be held more responsible for her/his appearance and the evaluation of that person will become more negative. The literature review will attempt to support the views that people do hold unrealistic expectations of plastic surgery and that they attribute negative qualities to a stigmatized person, such as a person who has been facially disfigured due to a burn injury. Finally, the review of the literature will undertake to support the belief that people with unrealistic expectations of plastic surgery will assign negative attributes to a disfigured person.

Unrealistic Expectations of Plastic Surgery

The miracles that are attributed to plastic surgery, not to mention the 'amazing transformations in personality' that are also reported have unfortunately given the general public an impression of achievements that are not always commensurate with the facts (MacGregor, 1974, p. 153).

The general public has attributed almost magical power to plastic surgery and its ability to aid an individual in achieving an "ideal" appearance. Plastic surgery could perhaps best be viewed as two different types of treatment; (1) cosmetic surgery, and (2) reconstructive surgery. Cosmetic surgery would refer to the type of operation performed to improve appearances. Appearance may successfully be enhanced for people who are dissatisfied with noses or breast size or signs of age, that is those people with cosmetic concerns. However, even in these cases, patients are often disappointed that the new appearance does not drastically improve their lives. They often have false hopes that their social or vocational lives will be enhanced simply because of the change in appearance. Although the surgery may be successful, the changes incurred do not extend to other areas of their lives. However, a large portion of plastic or reconstructive surgery involves working with disfigured people in an attempt to "make" them appear more congruent with the accepted norms of a society and to address functional concerns. In these instances, the goal may not be to approximate an "ideal" appearance;

instead, the aim is simply to allow the patients to gain maximal functioning and a more acceptable appearance. The changes in appearance may be excruciatingly small for the patient. Miracle cures or changes are impossible. Yet, high profile "miracle" outcomes may cause the general public to expect that these results are the norm instead of being exceptional or particular cases. MacGregor (1974) warns that no matter how successful the reconstructive surgery has been in restoring functioning, if the cosmetic results do not fulfil expectations and allow the person to look "normal," the treatment will not be viewed as satisfactory from the patient's standpoint. The fantasy of becoming "like everyone else" will be destroyed, and the individual may feel cheated, angry or apathetic.

There has been little empirical research into the question of the beliefs held about the potential benefits of reconstructive surgery. Some authors have reported that there are unrealistic expectations of surgery both on the part of the patients and the general population (Bernstein, 1976; MacGregor, 1974; Davis, 1961). These findings resulted from interviews with disfigured patients and those seeking cosmetic surgery and involved asking them how they felt other people reacted to them. Direct consideration of whether people do overestimate the benefits of surgery has not occurred. It does seem to be an important issue, especially when one considers how these unrealistic

expectations may influence peoples' attitudes to and interactions with a disfigured person. From personal experience, the author has found that people do not seem to appreciate the limits of reconstructive surgery. In working with two children who had been disfigured in a house fire, a frequent question was, "Can't they do something more to improve their appearances?" The answer was basically "no", although further operations would be in store for the children to allow for growth and to restore maximal functioning. The fire had been ten years ago and still more surgery would be required. The amount and severity of burning that these two children suffered gravely limited the effectiveness of cosmetic surgery. Replacing noses, opening eyelids, ensuring mouths would close and so on - the functional concerns - were more essential and possible than cosmetic concerns. Experiences with other peoples' reactions to the two children demonstrated to those closely involved the limited understanding of reconstructive surgery and its restrictions. It leads one to wonder if it is the general opinion of the public that reconstructive surgery can return a person to "normal" or near-normal appearances in all cases. If these unrealistic views do exist, the question then becomes how do people view the disfigured individual and what type of attributions do they ascribe to the person. It seems to be a reasonable hypothesis that if people believed that a disfigured person's appearance could be improved through more surgery, then they would tend to

assign responsibility to the person for her/his appearance, and to assign negative attributes to that person. The underlying view would be that the disfigured individual had made a choice of some sort to remain disfigured; therefore, there must be some "negative" characteristics about the person that would allow one to make such a devalued and deviant decision.

Not all disfigurements are equal in their impact on appearance. Both the type and location of the disfigurement may influence how other people react and effect the attributions they assign to that person. There has been little research that focuses on disfigurements per se, but research in other areas may be useful to examine.

Supporting Data from Related Research

In discussing stigmas in general, Goffman (1963) espoused the position that people who have contact with a stigmatized person, such as someone who is disfigured, "fail to accord him the respect and regard which the uncontaminated aspects of his social identity have led them to anticipate extending, and have led him to anticipate receiving; he echoes this denial by finding that some of his attributes warrant it" (pp. 8-9). Although there may be limited research that directly considers the attributions assigned by people to a facially disfigured person, there are studies in other areas that may offer insights into this question.

Rape.

Rape victims, like burn victims, are the helpless subjects of a violent crime. Although it would seem sensible that people would sympathize with the victim and blame the perpetrator, it appears that the victim is not held blameless but is in some manner held responsible for the rape. This finding would be consistent with the perspective of the just world hypothesis, since people would need to justify why the victim was made to suffer. In order to do this, they would devalue the victim and in some way come to believe that she deserved or caused her suffering. Jones and Aronson (1973) presented subjects with a description of; (1) either a rape or attempted rape, (2) a victim who was either a virgin or married woman (considered to be respectable) or a divorcee (considered to be less respectable), and (3) the assailant. They were then asked to report how much fault they assigned to the victim and to determine the appropriate length of imprisonment for the culprit. Not surprisingly, the findings indicated that as the severity of the act increased, the term of the imprisonment also increased. More significantly, the more respectable the victim, the greater the fault or responsibility that was attributed to her. It appeared that the more severe the crime, both in terms of respectability and suffering, the greater the need to attribute causality, that is to attribute fault, to the victim. Burt (1980)

suggested that people do accept the "rape myth" which refers to the idea that the victim somehow deserves to be raped or does something to cause the assault. A great deal of research has focused on the phenomenon of fault being attributed to the rape victim and the derogation of the woman. Despite divergent results in what factors maximize the blaming and derogation of the victim or which conceptual framework is used to explain this phenomenon, the research does consistently indicate that the victim is held responsible for the rape (Jones and Aronson, 1973; Calhoun, Selby and Waring, 1976; Calhoun, Selby, Cann and Keller, 1978; Kanekar and Kolsawalla, 1980; Bolt and Caswell, 1981; Smith, Keating and Hester, 1976; Burt, 1980; Luginbuhl and Mullin, 1981; Richardson and Campbell, 1982; Pallak and Davies, 1982; Acock and Ireland, 1983). These findings point out how the innocent victim can be held responsible for her situation and in turn be berated or assigned negative characteristics by observers.

Obesity.

It may be that in the case of obesity, people tend to blame the person for her/his condition, and to apply adjectives such as lazy, greedy or not possessing self-control. Although some individuals may believe that the stigma associated with obesity is not as severe as others, Cahnman (1968) points out that there is almost a

moral factor that is introduced and may aggravate the stigma. By "moral factor," Cahnman is referring to the idea that obese people are seen to control their destiny; the view that they could lose weight if they wanted. Lyman (1978) points out that gluttony is one of the seven deadly sins. The obese are stigmatized, rejected and ridiculed because their addiction is so visible in its consequences. People who do not overindulge view obesity as a manifestation of human frailty and believe that the obese person could be thinner if s/he really desired it. Allon (1982) also considered this issue of responsibility, and proposed that unless the obese can offer an excuse for their weight, such as a thyroid condition, their characters will be questioned and they will be seen as self-indulgent with little will-power or self-discipline. It is this responsibility for the weight condition that may cause the obese to be stigmatized. Thus, if the problem can be attributed to some physiological condition, the obese person would not be devalued. It is when there is no such excuse that stigmatization and devaluation occur. Richardson, et. al. (1961) consistently found that the obese figure was one of the least preferred pictures presented to subjects. These findings have been replicated by Goodman, et. al. (1963), Matthews and Davies (1966) and Richardson (1971). Maddox, Back and Liederman (1968) used a picture ranking task with one hundred and ninety-nine subjects from a stratified random sample. This sample included men and

women who were either of normal weight or overweight. The subjects were asked to complete a semantic differential scale that considered views towards the actual self, ideal self, and obese person. Their findings demonstrated the negative evaluation of the obese and that responsibility is attributed to the obese individual. Other research has supported these results. Hiller (1982) tested college students and their attitudes towards the obese. The results indicate that the obese are stigmatized and rated more negatively on a personality scale than normals. In addition, it was found that the students were less lenient towards the obese than other handicaps or other deviant groups (e.g. Ku Klux Klan, lesbian, convict). It appears that the obese are similar to the physically handicapped in that both must wear their problem for all to see. However, unlike most handicapped people, the obese are believed to be responsible for their condition (Wooley, Wooley and Dyrenforth, 1979) and thus are derogated more. Perhaps, if the general public does idealize the powers of plastic surgery, the facially disfigured would also be seen as being at least partly responsible for their condition and derogated.

Handicaps.

In general, research has indicated that handicapped people are devalued and that the devaluing attitudes that

disabled people confront influence their self-concept and acceptance in society. Studies that require people to preferentially rank pictures of normal, handicapped or obese figures consistently find that subjects prefer the normal figure over all others (Richardson, et. al., 1961; Goodman, et. al., 1963; Matthews and Westie, 1966; Maddox, Back and Liederman, 1968; Richardson, 1971). Aamot (1978) demonstrated that normal subjects reacted differently to pictures of people with facial deformities than pictures of normal faces. Subjects took longer to identify the sex of the person in the picture when the face was deformed. In this study, burns were regarded as the most disruptive of the facial deformities presented.

Another stream of research has focussed on the interactions between normal subjects and handicapped confederates (Kleck, Ono and Hastorf, 1966; Kleck, 1968). In these studies, the reactions and behaviour of the normal subjects are recorded during interactions with either a handicapped or normal confederate. The results indicate that subjects became more stressed (as measured by galvanic skin responses) when the handicapped confederate entered, terminated conversations sooner, and expressed opinions that were less representative of actual opinions since opinions tended to be distorted in a direction that was seen as being "kind" to the handicapped person. One study examined the interaction between handicapped subjects and normal or

handicapped confederates (Comer and Piliavin, 1972). This study showed that the handicapped subjects were less comfortable interacting with the normal confederate, which shows that the disruption to interaction is not one-sided. Comer and Piliavin propose that the reason this happens is that the handicapped subjects may stigmatize themselves and thus assume that their presence is disruptive for a normal person.

Ray (1946, cited in Wright, 1960) found that normals, when presented with pictures of either a normal or handicapped person, viewed the handicapped person to be more conscientious, to feel more inferior, be a better friend, attain higher grades, be more even-tempered and religious, party less and feel more unhappy. It appeared that subjects tended to assume characteristics about the handicapped person based on the stereotypic views they held about handicapped groups. There is also the view that non-handicapped people will attempt to "be kind" to those less fortunate even though they may also reject or avoid the handicapped. Katz, Glass, Lucido and Farber (1977) conducted a study in which normal subjects were required to deliver noxiously loud or mild noise signals to handicapped or normal confederates using a learning task paradigm. Then, the subjects were asked to rate the confederate on a semantic differential scale. The findings indicate that the least favourable post-evaluations occurred for the

handicapped confederate under the noxious feedback condition. In a situation where subjects cannot compensate the handicapped person, or at least act "kindly", but instead must inflict more punishment upon her/him, they react less favourably to the disabled individual. When people cannot react to the handicapped in a manner acceptable to themselves, which could either be avoidance or sympathy, the ambivalence they experience is highlighted and the subjects tend to denigrate the disabled confederate as if to restore some balance. Snyder, Kleck, Strenta and Mentzer (1979) also considered the possibility that although people are unwilling to admit it, they desire to avoid contact with the handicapped. When subjects were able to satisfy this hidden motive without causing it to become visible, they opted for this alternative.

These studies seem to suggest that although socialization forces people to project the image of accepting and sympathizing with the handicapped, people most often would prefer to avoid interaction with the disabled. Moreover, when interacting with a handicapped individual, people feel uncomfortable and may respond to that person in a stereotypic manner. The handicap becomes a defining characteristic of that person which others use in the development of attributions and attitudes as seen in the burn disfigured individual.

Burn Disfigurements

One type of traumatic injury is a burn-inflicted deformity. A burn victim undergoes an "intensely traumatic experience - catastrophic, painful, deforming, debilitating, and even dirty, because of the invariable presence of infection" (Andreasen and Norris, 1972, p. 352). Although disfigurement is often an outcome of the burning, it is not the sole trauma experienced by the burn victim. The event of the injury itself is terrifying and painful and only marks the beginning of the suffering the person will face. S/he also is confronted by intense pain, forced dependency on medical staff, repeated hospital admissions and operations, and the fear of death. The scarring involved can vary in extent and location, with contractures of the skin being common. Discolouration of scarred skin may also occur and further mar the person's appearance. The scarring can be quite massive and can affect more than one feature of the individual. A person's entire face may be deformed by the fire, with a loss of eyebrows, noses, ears, lips, etc. The face may become masklike. In many cases, the extent of the burning is massive, and reconstructive surgery is limited because of the lack of healthy tissue for skin grafts. According to Knudson-Cooper (1981), plastic surgery is often unable to restore a person's appearance to normal. Instead "the best that can be hoped for is flat scars and normal joint function and an approximation of normal facial features" (p. 31).

In the past, a severely burned person would have little chance for survival. Now, because of the better medical care of burns, more of these people do live and they must bear the scars of their accident throughout their lives. Although survival rates are higher, this does not mean that reconstructive surgery has advanced enough to restore former appearance. Techniques have been improved, but for the severely burned, obvious deformity will still occur in most instances. Thus, an increasing number of patients who have been burned and disfigured are having to cope with a new body-image that will be influenced by the reactions of others.

The burned person often suffers permanent disfigurement that serves as a reminder of the accident. The injury often occurs in uncontrollable events (e.g., explosion), or where significant others also suffer or may die (e.g., house fires), or where the "accident" may be viewed as avoidable (e.g., fires started by careless attention to heating devices, storing flammable materials, smoking, etc.). These variables may influence how the burned person copes with the injury or adjusts to the physical disfigurement. Guilt, depression and grief reactions are all emotional reactions researchers have reported occurring in burned people (Andreasen and Norris, 1972; Chang and Herzog, 1976; Cowin, 1964; Goldberg, 1974a; Andreasen, Noyes and Hartford, 1971; Solnit and Priel, 1975a), and these feelings may effect

their ability to manage their new identity. Further, the cause of the injury may have connotations that will also act to influence the reactions of others. It may also be possible that people react to some types of deformity differently. Richardson, Goodman and Hastorf (1961), Goodman, Dornbusch, Richardson and Hastorf (1963) and Matthews and Westie (1966) considered the preferential ratings by non-handicapped subjects of various pictures. In each picture a figure was shown. This figure was either normal, had a brace and crutches, was in a wheelchair, was missing a left hand, had some slight facial deformity, or was obese. The results of these three studies all tend to support the view that people are more accepting of some handicaps than others. In these experiments, the non-handicapped figure was most preferred while the obese or facially deformed figures received the lowest ratings. This suggests that some forms of disfigurement may be less anxiety-arousing and therefore less upsetting to other people. Richardson (1971) and Albrecht, Walker and Levy (1982) both suggested that people who are stigmatized due to physical impairment are not an undifferentiated group but that different types of disability cause different degrees of social stigma. That is, people tend to perceive these subgroups of disabled people as having different degrees of negative qualities. In the study by Albrecht, Walker and Levy, one hundred and fifty managers of corporations were shown a list of various disabled and deviant groups and

asked to; (1) complete a social distance scale, (2) indicate who they felt was most responsible for their condition from a list of six specific groups, and (3) answer two open-ended questions to test their personal perceptions for rejection. Albrecht, et. al. found that there was greater rejection of those people with visible disfigurements than people with nonvisible or degenerative conditions. They concluded that it was the perceived disruption of social interactions that was the best explanation of the differential social distance from individuals with various stigmas. Burns may be viewed as especially horrific or "dirty" or grotesque, and may lead people to reject the burned person to an even greater extent than occurs for victims of other types of disability.

Although the differentiation between different types of deformity may appear arbitrary, for the purposes of this study only burn-inflicted injury will be considered. Following from the conclusion of Albrecht, et. al., massive visible scarring would likely act to disrupt social interactions greatly and therefore decrease the acceptance of burn victims. In order to maximize control, the reactions of people and attributes they assign to a deformed person will only be examined with a burn-inflicted disfigurement.

Location of the Disfigurement

The location of the burn-inflicted disfigurement may influence the reactions of other people. Johnson (1977) reported that the worse the burn or the more visible it was, the more negative the after-effects on adjustment. As Goldberg (1974a) points out, those people with burns below the face may cover up their disfigurement in the majority of instances and in this way minimize the negative reactions of others. MacGregor (1974) reported that facial disfigurements are one of the most anxiety-producing and least tolerated of all possible physical deformities. Richardson, et.al. (1961) reported that facial deformities were among the least preferred of all handicaps. They concluded that the lowest rank was assigned to those figures whose disabilities were nearest the face. Despite the fact that the facial deformity presented was not massive and would require close scrutiny to detect, this figure was consistently given a low rating. These findings have been replicated by Goodman, et. al. (1963) and Matthews and Westie (1966). It appears that the most visible handicaps are the most socially destructive to people (Bernstein, 1976; MacGregor, 1974; Albrecht, Walker and Levy, 1972; Siller, 1963). Facial scarring can be covered up with cosmetics to some degree, but the disfigurement will still be visible when the damage is extensive. Although the burned person may attempt to disguise the disfigurement, the

face is open to public scrutiny and the scars are often difficult to mask.

The face is exposed and has become the symbol of the person's identity, personality and emotionality (Solnit and Priel, 1975b). It is the first aspect of a person that is noted by other people. According to Goffman (1963), when someone new enters, appearances are the primary basis on which people make decisions about that person's status and attributes, that is the social identity of that individual. First impressions are determined by appearances and the face is the most visible characteristic available on which to base these impressions. The face is not only important in initial contacts, but continues to be of great significance. Lerner, Karabenick and Stuart (1973) considered the importance of twenty-four body characteristics to college students. They presented the list of the characteristics and then administered four scales to assess how important these traits were to them as well as to ascertain a measure of their satisfaction with their own bodies and their self-concepts. One of the findings demonstrated the high ranking assigned to the face. Of the various characteristics listed, the face was ranked as second in importance by both males and females with only overall appearance being ranked higher. The face, therefore, is not only important in the development of initial impressions of people, but continues to be an important variable in

determining attractiveness and self-concept. Different facial features have come to suggest different personality characteristics, such as a person with beady, close-set eyes being viewed as potentially the criminal type. Goffman (1963) offers the example of distended capillaries on the cheek and nose being indicators of alcoholic excesses. Although these traits may be inaccurate, people tend to use them as guides and do make some decisions about a person depending on facial appearances. A person who smiles a great deal may be assumed to be friendly and sociable. One might be more likely to approach a smiling person than someone who is not smiling. It seems that the face is of primary importance in interactions and that deformities of the face may be extremely disruptive to these interactions and lead to the devaluation of the deformed person. Reactions to the facial deviance are expected to be most marked and thus the focus for this study.

Importance of Appearance

An underlying assumption of this research is that physical appearance is a pervasive factor in the attributions that people assign to others, a point that is strongly supported by research in various areas. Appearance is the aspect of a person that is most visible and accessible, and one on which others base their initial opinions and assumptions about that person. Even though

they may not know the person, the appearance of that individual will lead them to make certain decisions about personality, successfulness, intelligence, et cetera. Wright (1960) espouses that in initial contacts there are many cues from a person's outward appearance that act as sources of information about that person. Appearance, or more specifically attractiveness, is an important aspect of how people judge or rate others. Despite the adage "You can't judge a book by its cover," it appears that people do just that when judging other people. Reams of literature have supported the notion that individuals who are attractive are viewed as being more intelligent, sociable and competent than less attractive people (Dion, Berscheid and Walster, 1972; Cash, Kehr, Polysen and Freeman, 1977; Miller, 1970; Berscheid and Walster, 1974; Dion, 1972). Typically, these studies present groups of subjects with a photograph of either an attractive or unattractive person (as defined by a pre-test). The subjects also receive some information about the person which remains identical for both attractiveness conditions. Then the subjects are asked to complete some measure(s) that basically attempt to determine if the attractive individual is judged more favourably than the unattractive individual. Also, there is evidence that individuals who are attractive have an increased likelihood of being evaluated positively on job application resumes (Dipboye, Fromkin and Wibeck, 1975; Dipboye, Arvey and Terpstra, 1977). These are only a few of

the studies from the area, but they do indicate the importance of appearance. Basically, the assumption appears to exist in our society that what is "beautiful is good" [Schiller, (1883) cited in Dion, Berscheid and Walster, 1972].

Daily we are confronted with the view, presented through television, magazines, radio, books, movies and advertisements, that attractiveness enhances basic worth. In general, it is the tall, handsome man who is the successful, intelligent hero while the less attractive person is the villain, and portrayed as either evil and immoral or unsuccessful, poor and unhappy - or all of these combined. In some cases, the evil of the villain has been demonstrated and emphasized by the presence of some facial scar - the wound of some other sinister encounter. In some more fanciful work, the evil or unhappiness of a character can be dissipated when the scar miraculously disappears. Meyerson (1948), Thurer (1980), Livneh (1980) and Elliott and Byrd (1982) all record the numerous occasions in literature where physical deformities are employed to characterize evil. Comic book villains are sometimes portrayed as being grotesquely disfigured, sometimes as a result of their sinister plots. People have come to value "attractiveness" as an outward sign of these attributes and deformity characterize some defect or evil within the person.

The advertising field has supported the view that it is essential to look attractive in order to be happy and successful, and it has offered an overwhelming number of methods to aid one in becoming beautiful. A great value appears to be placed on the ideal of physical beauty, and obtaining this ideal appears to be an obsession in western cultures, one which businesses have perpetuated and exploited. Yet, this highly valued ideal is beyond the reach of those who have been disfigured through a burning. Wright (1960) concluded from clinical observations that disfigured people idolize beauty and desire to attain this ideal. Despite improvements in their appearance, they will repeatedly fail to reach this goal, and they will feel only dissatisfaction with the gains achieved. They will be frustrated and disillusioned because this highly valued ideal seems to elude them.

Attributions and Appearance

The area of attribution research is extensive and involves a variety of theoretical views and experimental approaches. Basically, attribution research is interested in examining the causal explanations that individuals give to events, and the factors involved in this perceived causation (Kelley and Michela, 1980; Harvey and Weary, 1984). Basically, attribution research attempts to delineate those rules used in attempting to infer the causes of a behaviour or event and to investigate the biases that occur throughout this process. Attributions are assigned in order to explain what caused an event or behaviour that presents itself. Shaw and Sulzer (1964) espouse the view that a significant factor in interpersonal behaviour is the degree to which an individual is perceived as being responsible for events that in some way impinge upon another person. If a person is held responsible for the events, s/he will be blamed if the outcome is negative and praised if the outcome is positive. Jones, Kanouse, Kelley, Nisbett, Valins and Weiner (1972) describe the process of assigning attributions as being employed by individuals to place information that they are presented with into a

cause-effect context. When confronted with information, which may be incomplete, people make decisions concerning the event, actions and the people involved. In order to be able to understand situations and peoples' behaviour and to predict outcomes, individuals use attributions to place the information into a cause-effect pattern.

Kelley and Michela (1980) proposed the following diagram as a model for understanding attributions:

<u>Antecedents</u>	<u>Attributions</u>	<u>Consequences</u>
Information	Perceived	Behaviour
Beliefs	Causes	Affect
Motivation		Expectancies

(p. 459)

People have some information and beliefs about a situation or person and they make certain attributions based on these antecedent conditions. The attributions they assign will then influence the way they behave towards and feel about the person or event. It will also lead them to develop certain expectancies for future actions or outcomes from the person or event. In the context of the present paper, the antecedent conditions would involve the unrealistic expectations of reconstructive surgery, the belief that in some way the person had decided to remain deformed, and perhaps some belief that the person was somehow responsible for the injury itself. This last point relates to the type of injury being due to fire, an event that is frequently

accidental yet perceived as somehow avoidable. Where the burning was unavoidable and the outcome of a catastrophe, people may need to assume that in some way the injured party deserved to be punished. If this type of "blame" is not assigned, people must then face the terrifying prospect that they could also endure such horrors. This view is congruent with the "just world" hypothesis proposed by Lerner (Lerner and Simmons, 1966; Lerner and Miller, 1978). The just world hypothesis proposes that "people have a need to believe that their environment is a just and orderly place where people usually get what they deserve" (Lerner and Miller, 1978, p. 1030). People tend to believe in a just world in order to perceive their environments as being orderly and fair. If an injustice occurs, people will either attempt to compensate or blame the victim. If compensation is possible, then balance or a sense of fairness can be restored. In situations where there is no compensation possible, individuals may tend to devalue or blame the victim. Meng (1938, cited in Wright, 1960) extends this concept to an individual who is disabled. He suggests that people believe the disfigurement is some sort of punishment even if they know that the disfigured person did not do anything to deserve such punishment. The handicapped individual is thus seen as dangerous, since s/he will be seen as prepared to commit an evil offense in order to warrant the punishment. Lerner and Simmons (1966) conducted a study to examine the just world hypothesis. The study was

quite involved and manipulated a variety of variables and levels of these variables. To summarize the method, seventy-five female subjects were introduced to a female confederate and then observed her receiving shocks. All subjects were asked to rate the confederate, but they were; (1) able to change her fate by stopping the shocks and allowing her to be rewarded, (2) had no control over her fate so she was viewed as a helpless victim, or, (3) saw the confederate act as a martyr. The findings from the ratings of attractiveness basically showed that when the subjects were unable to stop the suffering, the "victim" was rejected and devalued. When they could compensate the victim through the reward condition, they rejected the victim the least. In the martyr condition, where the confederate is responsible for the continued suffering, the subjects rejected her the most - supposedly needing to devalue her greatly in order to justify her pain. This study, which typifies the research by Lerner and his colleagues, demonstrates support for the just world hypothesis.

Attributions influence the attitudes people develop towards events, groups or other individuals. Similar to the schematic view presented by Kelley and Michela (1980), Elliott and Byrd (1982) propose that attitudes are composed of three components. These components include; (1) a cognitive one, which refers to the information available to people on which to base their attitudes, (2) an affective

one, which involves the emotional reactions to the event or person, and (3) a behavioural one which is influenced by both of the preceding components. Negative attributions will lead to the development of negative attitudes. If the perceived causes of an event are seen as being due to some negative characteristic of a person, the attitudes toward that person will reflect this view and tend to be negative. If one believes people are disfigured because of some evil or flaw in their personalities, then the attitudes that develop towards those people will likely mirror this belief. The information available will be influenced strongly by the attributions made, and this component in turn will influence both the affective and behavioural aspects of the attitude.

The attributions made, according to the hypothesis of this paper, would involve negative qualities being assigned to the person. The disfigured person would be berated and devalued. The consequences would include influencing how people think, feel about, and act towards the disfigured person. In addition, they may develop expectancies of that person to behave in a certain way. If the concept of a self-fulfilling prophecy is correct, then these expectancies and the behaviour of other people may cause the disfigured person to devalue themselves and, eventually, begin to act in a way similar to what other people expect. Elliott and Byrd (1982) propose that the attitudes towards the disfigured are communicated to the disfigured person through

behaviours including avoidance, pity and anxiety. These attitudes cause the disfigured person to feel embarrassed, self-pitying, apathetic and to develop a lowered self-concept which will in turn cause that person to berate and devalue her/his own abilities and to act in a consistent manner with the lowered self-concept. The cycle would be perpetuated since the disfigured person may now act consistently with the attributes assigned originally by other people. The conclusion of these people would be that their initial attributions were accurate.

There is support in the literature for the idea that attractiveness influences the attributions that people assign to others. Dion (1972) reported that adults' evaluation of a child who committed a serious transgression differed as a function of that child's physical attractiveness. Dion, Berscheid and Walster (1972) found that attractive individuals were judged to be more socially desirable, and had better prospects for happy social and professional lives. Diboie, Fromkin and Wiback (1975) and Diboie, Arvey and Terpstra (1977) reported that physical attractiveness was a significant factor in the evaluation of job applicant resumes. Cash, Kehr, Polyson and Freeman (1977) found that individuals with severe personal problems were perceived to be less seriously disturbed when they were physically attractive; also, those individuals with minor personal problems are perceived as being less well-adjusted

when they were viewed as unattractive. Miller (1970) also saw a pattern wherein unattractive people were consistently associated with negative, undesirable adjectives on a scale while highly attractive people were judged significantly more positively. Berscheid and Walster (1974) concluded that the results of various stereotypes studies demonstrate that physically attractive people are assumed to possess more socially desirable personalities than less attractive individuals and that they are happier, and wealthier in material benefits. MacGregor (1974) described a study in which people were shown three pictures of disfigured individuals and recorded their responses to the picture and what they felt the person would be like. There was a high percentage of unfavourable emotional responses and stereotyping (e.g., low socioeconomic status, low IQ) which in reality were inaccurate assumptions about that person's character. MacGregor concludes that not only were these patients assigned socially unacceptable traits but they were also designated inferior roles and statuses.

Thus, it appears that people do assign positive attributes to an attractive person and are more likely to assign negative attributes to an unattractive person. However, a burned person with facial disfigurement is not simply "unattractive" but violates the norm of physical attractiveness dramatically. Such a person may be viewed not only as disabled but also deviant. This may be

particularly true if people blame the victim for the injuries, since then s/he would have caused the accident or decided to remain aberrant. MacGregor (1974) reports that in some case studies, disfigured people noticed that others reacted differently when the "disfigurement" was due to the reconstructive process, such as skin grafts. That is, when disfigured people were in the process of "correcting appearances," even though their appearance might be more deviant due to the treatment, they felt people were more accepting of them and tolerant of their appearances. Thus, when the deviant appearance can be attributed to the reconstructive process and the deformed person perceived as doing something to improve appearance, people were considered to be less rejecting. In research conducted by Fincham (1982) where subjects were presented with four behavioural effects (intentional act with either mild or severe consequences and either an internal or external cause assigned), it was found that blame was greatest when the cause was viewed to be internal. Thus, if people are perceived as being somehow responsible for their disfigurement, they may be blamed and devalued more.

Since the physical deformity is so striking, people tend to focus on it and generalize from the deviant physical appearance of the disfigured person and to make decisions about character (Wright, 1960). This limited, one-faceted piece of information becomes central in the attributions

that develop. When people assign attributes based on limited information, there is a tendency to assume that the characteristics inferred are due more to dispositional factors than to situational factors (Harvey and Weary, 1984). Kelley (1972) also commented that when attributions are made on limited data there is not enough consideration of external causes in the judgment of a person's behaviour. This suggests that those attributes based solely on physical appearance will be more likely assumed to be due to internal personality characteristics of the person than to the external, environmental factors because of the limited information available. Also, since people may not know why the person is disfigured, they may be more likely to assume it relates to that person's character, not to situational events. Further, Cunningham and Kelley (1975) reported that when situations that subjects read about had serious consequences, the subjects were more likely to believe that they had learned something about the character of the person in the situation. Walster (1966) hypothesized that when the consequences of an event are serious, there is a greater tendency to assign responsibility, a phenomenon that has received support in other studies (Sadow, 1983). The burn injury, if disfigurement is massive, would be suggestive of extreme consequences, and may lead people to use the minimal information available from appearances to make decisions about the person's personality traits. To compound this problem, Kelley (1972) espouses the view that the evaluation

of an act is also guided by the avoidability of such an event. As proposed earlier, in many instances injuries due to a burning may be viewed as somehow avoidable, and therefore lead people to evaluate the person negatively.

It seems that physical appearance does influence the attributions people assign to individuals. It also appears probable that facial disfigurement will affect the attributions that other people infer in some manner. It is as though the facial appearance is perceived as being an accurate portrayal of the character of the person. A marred face conjures up feelings that the total person is somehow marred (MacGregor, 1974). These interpretations may play a significant role in the behaviour and attitudes of people to the disfigured individual and in turn, negatively influence self-concept.

This study will examine this relationship to test the hypothesis that people will ascribe negative attributions to a facially disfigured person, particularly when they view the disfigured person as being somehow responsible for the deviant appearance. This hypothesis is important since the reactions of others may have a significant impact on how the disfigured person copes.

Importance of Considering the Reactions of Others

One area in need of research concerns how other people perceive and react to the burn victim who has been disfigured. An individual's self-concept and self-esteem are based partly upon the interpretations made about the reactions of other people to that person. Bernstein (1976), Schechter (1961) and Schilder (1950) all emphasize the importance of other peoples' perceptions of a person in the establishment of that person's self-concept. Schonfeld (1963) postulated that "each of us carries around a mental image of our own appearance which is more than a mirror image and may or may not closely approximate our actual body structure" (p. 845). This mental image may be influenced by the negative reactions of others. The change in outward appearance may alienate the person from society and cause them to view themselves with less acceptance. Disfigured people will be influenced by the view society expresses regarding their role and status (Roehrer, 1961), and this may force them to question their own self-worth. Hentig (1948) proposed that although self-concept is influenced by an inspection of ones' own deficit, it is also influenced by the suspicious interpretations of other people's expressions, actions and words, and by the perceived view of others' attitudes. When disfigurement occurs, other people may react thoughtlessly or cruelly or avoid all contact with the burn victim. They may respond with aversion, and they

may never be able to see past the scarred exterior. People communicate negative attitudes to a disfigured person through avoidance, anxiety, pity, rejection and overprotection. A disfigured person becomes aware of the attitudes underlying these behaviours, and in turn feels embarrassed, self-pitying, self-conscious, depressed which may result in a lowered self-image (Elliott and Byrd, 1982). Thus, the reactions of others influence the self-concept of the disfigured individual. Kinch (1963) supports this view and suggests that peoples' concepts of themselves emerge from social interactions which in turn guide or influence their behaviour. Thus, self-concept would be threatened by negative encounters with others, for external support and validation of self-worth are lost. The negative reactions of other people may have a profound effect on the burned person's self-concept. If a burned person is devalued or receives differential treatment from others, there may be negative consequences on that person's social and psychological well-being (MacGregor, 1974). Miller and Porter (1983) also suggest that victims of such events come to blame themselves for their misfortune because of the process of internalizing the negative reactions that society has projected. The understanding of how other people react to the deformity may help professionals intervene more effectively to promote a positive self-concept in the burn patient and decrease self-blaming attitudes. If people in general do overestimate the effectiveness of reconstructive

surgery, and in turn devalue the deformed person for not taking maximal advantage of surgery to improve their appearance, it may be possible to lower these expectations and aid people in more accurately assigning characteristics to the burned person. Thus, their reactions to the burned person may be more accepting since their expectations of reconstructive surgery becomes more realistic.

Hypotheses

The primary purposes of this study were to examine people's expectations of plastic surgery and to consider the attributes people assign to a facially disfigured person. There were two main hypotheses. The first hypothesis is that people in general do have unrealistic expectations of plastic surgery. This issue of expectations of plastic surgery, although mentioned in the literature, has not been systematically investigated.

The second hypothesis considered the attributions people attach to a facially disfigured person as the assigned responsibility for the deviant appearance changes. It was proposed that as responsibility assigned to the disfigured person for her/his appearance increases, negative evaluations of that person would also increase. In order to examine these hypotheses, four conditions will be employed. The subjects will be presented with one of the following

four conditions; (1) informed that no further reconstructive surgery is possible (lowest level of responsibility for deviant appearance), (2) informed that the person has discontinued surgery due to an internal reason, i.e., fear (maximal level of responsibility for deviant appearance), (3) told that the person has discontinued due to an external cause, i.e., cost of surgery, and (4) given no information concerning the surgery received or yet available. These four conditions will be explained in more detail in the procedure section.

In reference to these four conditions, specific predictions can be made in accordance with the hypothesis. If the first hypothesis is supported the results should differentiate between conditions 1 and 4. The first hypothesis would predict that the disfigured person would be devalued more in condition 4 than in condition 1. It should also be clear that the expectations people hold of plastic surgery would be greater than what plastic surgery could realistically accomplish. This will be assessed by comparing all subjects' scores on an Expectations of Plastic Surgery questionnaire to a score on that questionnaire that represents reality, that is, what score would be obtained if subjects knew what to expect of plastic surgery in reality.

The second hypothesis would also predict that the results would show a differentiation between conditions 1 and 4. Moreover, when internal causes are given to explain why

surgery has been discontinued (condition 2), subjects should devalue the disfigured more than in any other condition. When the reasons given to explain the end of surgery are based on external causes (condition 3) then it is hypothesized that the devaluation should be less than for conditions 2 and 4 but greater than in condition 1. Thus, it is predicted that the results on the dependent measures will indicate the following ranking of conditions in terms of devaluation (from most to least): Conditions 2,4,3,1.

A third hypothesis presents itself based on these first two hypotheses. This third hypothesis would address how people with different levels of expectations of plastic surgery would evaluate the disfigured person on the various dependent measures. It is thought that people who hold high unrealistic expectations of plastic surgery will tend to assign more negative attributes to the disfigured person than people with lower expectations. This hypothesis will be tested by dividing subjects into three groups based on their scores on the Expectations of Plastic Surgery questionnaire. The three groups would represent subjects with; (1) low expectations, (2) moderate expectations, and (3) high expectations. It is predicted that as the level of expectation increases (from 1 to 3) the attributions assigned to the disfigured person will become more negative.

Method

Subjects

Subjects were solicited from the University of Manitoba undergraduate psychology student pool. Students received one credit hour for their participation to partially fulfil a course requirement. Both male and female subjects were used as subjects. Although sex was not viewed as an independent variable in this initial exploration of the thesis, it seemed potentially informative to examine the effect of sex and other demographic variables post hoc. Demographic material (age, sex, faculty) was collected. To ensure adequate power to allow for rejection of a false null hypothesis, there were 49 subjects per condition for a total of one hundred and ninety-six subjects.

Procedure

Subjects were run in groups of approximately 15-20. Upon entering the classroom, subjects were told that the purpose of the study was to examine how accurate people are in making decisions regarding a person's characteristics (see

Appendix A for instructions). They were shown a slide of an individual with some facial disfigurement and given a brief biographical description of that person (see Appendix B for description). Then they were asked to answer some questions about the person. The questionnaires used included measures of social distance which reflect how willing a person is to associate with another (McDaniel, 1969) and scales to consider the attributions assigned to the person. In addition, a behavioural measure was included to assess if subjects would "act" in accordance with their self-reported attitudes (see Appendices C-F for copies of all measures). A scale was used to ensure that the stimulus object did impact on the subjects (see Appendix G). There also was a scale to measure the subjects' expectations of plastic surgery (see Appendix H).

There were four conditions in this study. The dependent variables were the responses on the above scales; the independent variable was the information given to the subjects. The picture and information were identical in each condition except for the manipulation of the independent variable. There were four levels of the independent variable: (1) told person has had all plastic surgery possible; (2) told person has had some plastic surgery but has decided not to have any more because she is afraid of further surgery; (3) told person has had some plastic surgery but has decided not to have any more because

the cost (both in terms of actual price and time lost at work) makes further surgery impossible; and, (4) given no information as to the amount of surgery received or yet available. This fourth condition most closely resemble the situation in the natural environment where people do not have access to additional information regarding the ability of plastic surgery to improve appearances. If hypothesis one is correct, that is that people overestimate the benefits of reconstructive surgery, then in this condition the stimulus person should be rated differently than in condition one where the subjects are informed that no more surgery is possible. The direction of this difference is thought to fall in the direction of subjects in Condition 4 rating the person more negatively than subjects in Condition 1, but a two-tailed test was used in case the effect fell in the opposite direction. Conditions two and three are presented in order to directly check the hypothesis that if people do believe that a disfigured person has make a decision to remain deformed, they will be less accepting of that person and assign more negative attributes to her/him. Condition two differs from condition three in that in the former, the decision is based on internal reasons while in the latter, external circumstances influence the decision. Research in the area of attributions suggests that the presence of an internal cause increases blame while the presence of an external cause decreases blame (Kelley, 1980; Fincham, 1982). Thus, these two conditions have been

included to consider this relationship. Condition 2, then, represents the situation where the disfigured person would be held most responsible for her deviant appearance, with Conditions 4 and 3 (respectively) representing the next levels of assigned responsibility. Condition 1 is the case where the least amount of responsibility should be assigned to the disfigured person. To test hypothesis three, the variable Expectancy was created arbitrarily defining three levels. These three levels of expectations of plastic surgery were; (1) low, (2) moderate, and (3) high.

Measures

A number of measures were employed in this study. These measures include; (1) the Social Stimulus Value Scale adapted from Lerner and Simmons, 1966 (see Appendix C), (2) the Impressions Scale adapted from Kleck, 1968 (see Appendix D), (3) the Semantic Differential Scale adapted from Osgood and Suci, 1955 (see Appendix E), (4) a behavioural measure (see Appendix F), (5) a scale to consider the impact of the disfigurement on the subjects which was developed by Aamot, 1978 (see Appendix G) and (6) an Expectations of Plastic Surgery questionnaire developed by the author (Appendix H).

The Social Stimulus Value Scale was used by Lerner and Simmons (1966) to consider the attractiveness of a victim. They also employed a highly evaluative bipolar scale to

examine victim attractiveness based on the Likert procedure. The two scales gave a similar pattern of results which tends to support the validity of the Social Stimulus Value Scale. The reliability of this scale, though not thoroughly investigated, is suggested by its validity.

The Impressions scale used by Kleck (1968) consisted of six bipolar adjective pairs which were rated on a seven-point scale from 0-6. The basic scale used by Kleck was retained and constituted the first six items in the measure used in the present study. An additional nine pairs were adapted from a list of adjectives that Hampson (1982) reported. This measure is based on the Likert-type scales.

The semantic differential scales, as proposed by Osgood (1952), attempt to act as standardized measures of meaning. He described the method of semantic differential as involving two processes; (1) the use of factor analysis to determine the factors involved, and (2) the selection of specific scales corresponding to these factors that act as a standardized measure of meaning (p. 230). Osgood and Suci (1955) conducted two factor analytic studies based on 50 bipolar adjective pairs. In the first analysis, they applied Thurstone's centroid factor method to a matrix of correlations that resulted from 100 subjects' judgments of 20 concepts against the 50 adjective pairs. The second analysis involved the application of a factoring method to a matrix of percentages of agreement obtained when 40 subjects

made forced-choice decisions regarding the polar adjectives themselves without judging a specific concept. Using each approach, they identified three factors that consistently were found to account for the majority of the total variance and which showed considerable correspondence in the particular adjective items that defined them. These three factors were labelled as; (1) the evaluative variable, (2) the potency variable, and (3) the activity variable. Carroll (1969) described the psycholinguistic significance of these three factors and proposed that these dimensions may represent the fundamental dimensions in the adjustment of an individual to objects in the environment. He described the evaluative factor as referring to a person's tendency to either approach or avoid an object. It could be viewed as a measure of the extent to which the stimulus object has positively or negatively reinforced that person's responses (or is perceived as positively or negatively reinforcing responses). The second factor, the potency variable, was presented as referring to the measurement of the amount of effort that will be needed and exerted into a response to the stimulus object. The activity variable refers to the necessity of making movement in adjusting to the stimulus. For example, if an object is classified as fast rather than slow, it will be more necessary for the subject to adjust to the object.

The evaluative factor has been reported to consistently account for the largest portion of variability (Osgood and Suci, 1955; Kumata and Schramm, 1956; Prothro and Keehn, 1957; Carroll, 1969). The evaluative factor items are similar to the items comprising an attitude scale. However, the semantic differential scale allows for more than just an one-dimensional analysis of a concept. The factors of potency and activity extend the analysis to three-dimensional space. Rozendal and Wells (1983) examined the semantic differential scale's ability to tap not just the one dimension of evaluation, but also those of potency and activity, which should allow for a richer picture of meaning to evolve. Their findings suggest that the semantic differential dimensions did provide more information than a single-dimensional scale.

The semantic differential scale used in this study was a mix of items taken from the original list presented by Osgood and Suci (1955) and from a study conducted by Whitehead and Mathews (1977). The items have been utilized in other studies (for example, Rozendal and Wells, 1983; Marks and Sartorius, 1968), although each study reviewed appeared to use the mix of adjective pairs that were most appropriate for their area of interest. For the purposes of the present study Items 2, 3, 4, 5, 6, 8, 10, 12, 14 and 15 are directly from Osgood and Suci; items 11 and 13 were adopted from Whitehead and Mathew's work; items 1, 7 and 9

appeared in both studies. The three factors are identified by the following items:

Evaluative - Items 1, 2, 5, 7, 9, 11, 12 and 13.

Potency - Items 4, 8, 10 and 14.

Activity - Items 3, 6 and 15.

Although the three factors may enhance the information available from the data, in the overall analysis, it may be more efficient to use a composite score. This composite score would be the mean of the three factor ratings. Rozendal and Wells (1983) employed this method and labelled the fourth score value as a rating of general favourability. The subsequent examination of the individual factors may offer insight into how the subjects reacted to the disfigured person. It could be that the attitude scales and evaluative factor would indicate a favourable (or neutral) reaction to the person, yet the potency and activity scales may suggest that a great amount of effort is needed to adjust to the disfigured person. Thus, the three dimensional information provided by the semantic differential may be useful in interpreting the results.

A behavioural measure will be utilized to complement the attitude scale measures. Following the model that was previously presented of how attributions can be understood (Kelley and Michela, 1980), the consequences of the

attributions include behavioural acts that occur in response to the antecedent conditions (i.e., perceived causes). The inclusion of a behavioural measure could be useful in assessing whether people would "act" in the ways which they report they would. That is, it may be possible that people would report on an objective pen and paper instrument that they would not reject or berate the disfigured person or feel uncomfortable around that person. Yet, if the subjects are actually confronted with the disfigured individual they may react differently, i.e., their behaviour would not be consistent with their self-reported attitudes. This discrepancy could partly be due to the subjects' desire to present as socially desirable. They may respond on the written scales in ways which they deem to be socially appropriate, yet in reality their behaviour would not be consistent with these responses. Thus, the behavioural measure will offer additional information on how the subjects respond to the disfigured person.

The scale developed by Aamot (1978) acted as a check to ensure that the disfigurement did impact on the subjects. It was given after all the other forms were completed. Factor analysis yielded two factors; (1) degree of disfigurement tapped by questions 1, 2 and 6, and (2) degree of social handicap, tapped by items 3, 4 and 5. The coefficient of reliability was $+0.81$ and there was no significant difference between the responses given by male

and female subjects. This scale did seem able to differentiate between various types of disfigurement and different levels of severity to assess the impact of the disfigurement on the subject.

The Expectations of Plastic Surgery scale has been developed for this research to examine expectations of plastic surgery. It has high face validity but there were no validity and reliability checks conducted on this scale. However, in pilot work to determine which of three slides of disfigured women would be best to use in the research, the scale was able to differentiate between the three slides in the expected direction. The woman in one slide was clearly seen by subjects ($N=28$) as being less disfigured ($\bar{X} = 2.8$) and the total scores on the Expectations of Plastic Surgery questionnaire were comparably lower ($\bar{X} = 6.9$ as compared to $\bar{X} = 10.9$ and $\bar{X} = 12.6$). Since this woman was seen as less disfigured, people did not expect plastic surgery to be able to improve her appearance greatly. In contrast, when the woman was seen as quite disfigured ($\bar{X} = 5.8$ and $\bar{X} = 4.9$) the total Expectations of Plastic Surgery scores were also higher ($\bar{X} = 10.9$ and $\bar{X} = 12.6$). Based on this pilot work the third slide was selected to show subjects. The questionnaire, with the addition of one item, was then used in the study.

Analysis

The data were tested at alpha level equal to .05. The focus of the analysis was to examine differences between the four conditions of the independent variable (i.e., information available to subjects regarding the surgical history of the disfigured person) on the various dependent variables. Although there may be similarities in the information the dependent measures are tapping, it was expected that these measures would examine the question from slightly different perspectives, and that they were not totally equivalent in the information they provided. Since there were low correlations between the various dependent measures (r ranging from .005 to .440), this appears to be the case. There does not appear to be a problem with multicollinearity of the dependent variables. The component scores of the Semantic Differential scale did have a higher correlation (r ranging between .72 and .80) which is to be expected. Thus, it may be that subjects do not berate the disfigured person so that the responses on the Impressions scale and semantic differential scale would mirror this neutral or positive attitude; yet, subjects may prefer to maintain social distance from the disfigured person which would lead to low scores on the Social Stimulus Value scale and the behavioural measure.

Results

Hypothesis One

The first hypothesis that people do tend to overestimate the benefits of plastic surgery proved difficult to test directly due to the design of the study. Therefore, any conclusions proposed should be viewed cautiously and as requiring further research.

A measure of expectations of plastic surgery was completed by every subject in every condition. The hypothesis was assessed by comparing all subjects' scores on this scale to a score that represented reality, that is, the score that would be obtained if the subjects knew what to expect of plastic surgery for the disfigured person shown in reality. In fact, the slide presented someone who had been burned in a fire as a child and who had received plastic surgery. Her appearance would not be further enhanced by surgery. The scale was developed so that if someone knew these facts, the score they would receive would be two. The mean of the scores over all conditions was larger than this value ($\bar{X} = 9.918$, $s = 3.153$). This suggests that people do overestimate the benefits of plastic surgery. However, without the use of inferential statistics, it is impossible to reject the null hypothesis that these two values are not significantly different.

If it is assumed that $\mu = 2$ when the population represents people who know that all plastic surgery has been completed, then it would be possible to construct confidence intervals around the sample mean of 9.918 to see if the population mean of 2 is within this interval or not. The problem with this approach is that although $\mu = 2$ is a theoretically based assumption, there is no evidence of this experimentally. However, when the confidence intervals are constructed, it is found that the population mean of 2 does not fall within the confidence interval (95% CI for $\bar{X} = 9.918$ is $9.477 \leq \mu \leq 10.359$). Thus, the null hypothesis of no difference may be rejected. It appears that subjects in this study do have high expectations of plastic surgery.

It was proposed that an indirect method of considering this hypothesis would be to compare Conditions 1 and 4 on the various dependent measures to assess any differences in responding between these two groups. An one-way MANOVA was conducted to examine this relationship. It was significant (Wilks' Lambda $F(4,93) = 3.53$, $P > F = .0100$). Scheffe tests isolated the difference occurring on the Impressions scale (variable Attitude). Although it was hypothesized that the difference would result in Condition 4 subjects rating the disfigured person less positively than subjects in Condition 1, the opposite has occurred.

Hypothesis Two

An one-way MANOVA was used to test the second hypothesis that as the responsibility assigned to the disfigured person for her appearance increases, ratings would become more negative. Cell sizes were kept equal and subjects were assigned to conditions in a random fashion. This was to guard against any violations of the assumption of homogeneity of the variance-covariance matrix that underlies the MANOVA test. The results of the overall MANOVA showed a significant difference (Wilks' Lambda $F(12,500) = 3.36$, $P > F = .0001$). To examine this significant difference, Scheffe and Tukey tests were used. The Scheffe and Tukey tests identified the differences as occurring on the dependent variables Attitude and the Semantic Differential scale (SD). A summary of these differences are reported in Table 1. To consider the direction of these differences, it is necessary to look at the sample means of the different conditions which are reported in Table 2.

The component values of SD (the evaluative component [SDE], the potency component [SDP], and the activity component [SDA]) were also examined independently of the other dependent variables. An one-way MANOVA was conducted to determine if subjects respond differently on these variables in the different conditions. The MANOVA was significant (Wilks' Lambda $F(9,462) = 2.08$, $P > F = .0296$). Table 3 presents the results of the Scheffe and Tukey

follow-up tests indicating that the significant difference occurred for variables SDE and SDP. Table 4 presents the sample means of these three component variables.

Hypothesis Three

The third hypothesis, which emerged from the first two, was that subjects who held high (or unrealistic) expectations of plastic surgery would tend to rate the disfigured person less positively on the dependent variables. An one-way MANOVA was used to test this hypothesis. In this case, the criterion used for rejection was Pillai's Trace. This was done because Pillai's Trace is more robust when unequal cell sizes occur (Tabachnick and Fidell, 1983). This was an important consideration in this analysis. The overall MANOVA did reach significance (Pillai's Trace $F(8,382) = 3.01$, $P > F = .0027$). Scheffe and Tukey tests were employed to follow-up this significant overall test. The results of these tests are reported in Table 5. The sample means are presented in Table 6 to allow for examination of the direction of these differences.

It was also decided to examine the component scores of SD. Again, a one-way MANOVA was conducted, but this MANOVA was not found to be significant (Pillai's Trace $F(6,384) = 1.71$, $P > F = .1184$).

The possibility that males and females respond differently is a question that deserves future investigation. Although the design of this study is such that any direct analysis of this possibility is impossible, univariate F-tests were conducted for the four dependent variables. There were no significant F-tests, which fails to support the idea of differential perception based on the sex of the respondent.

Discussion

Hypothesis One

The results tend to suggest that the hypothesis that people do overestimate the powers of plastic surgery is accurate. However, because of weaknesses in the design, this cannot be definitively assessed. The results of exploratory analyses are in the predicted direction. When it is assumed $\mu = 2$, the population mean of two does not fall in the 95% confidence interval constructed around the sample mean of 9.918. This could mean that the null hypothesis of no difference should be rejected and the alternate hypothesis, that people do overestimate the benefits of plastic surgery, is tenable. It is proposed that since a score of two represents a realistic appraisal of the benefits of plastic surgery for the person presented, $\mu = 2$ is true for a population that knows the disfigured woman has received all possible plastic surgery and that her appearance cannot be further improved through surgery. This has not been experimentally identified by finding the mean of a large number of samples each with a large number of subjects. Yet, the Expectation of Plastic Surgery scale

(EPS) was developed in such a way that a score of 2 theoretically represents what are realistic expectations of surgery for the woman shown.

Another method of examining this hypothesis was to compare Conditions 1 and 4. The MANOVA indicated a significant difference (Wilks' Lambda $F(4,93) = 3.53$ $P > F = .0100$). The follow-up tests identified the difference as occurring for the variable Attitude. However, this difference is not in the expected direction, that is subjects in Condition 4 rated the disfigured person less negatively than in Condition 1. There are potential explanations for this apparent incongruity. Some researchers have suggested that people respond in a false positive manner to others who have a disfigurement (Doob and Ecker, 1970; Shaw, Humphreys, McLouglin and Shimmins, 1980) or a handicap (Ray, 1946 cited in Wright, 1960; Kleck, 1968). It has been suggested that this response may be an effort on the part of people to "compensate" for the misfortune of the helpless victim (Katz, et. al., 1977). In Condition 4, people are given no information about the disfigured person's history of plastic surgery, only that she was disfigured as a child in a fire. In Condition 1, although they still see the same slide, the subjects are now told that she has had all possible plastic surgery. This information may have the impact of creating the impression that the disfigured person is not a helpless victim but has

benefitted from medical intervention already. Her appearance has been compensated for by the surgery and subjects may feel less need to further "compensate" by viewing her in an overly positive light. This would also explain why Conditions 2 and 3 rated her less positively; these subjects know she has benefitted somewhat from plastic surgery but that she has refused further treatment. She is no longer a "helpless victim" but instead has made a decision to remain as she appears or to remain a victim. According to this formulation although some people may still feel obligated to compensate for her misfortune and evaluate her positively, other subjects may rate her more negatively because she is seen to have control over her decision to remain disfigured.

This hypothesis could be examined experimentally using two conditions. One group of subjects would be told nothing about the person's history of plastic surgery. This condition is comparable to Condition 4 in the present study. In a second condition, subjects could be told that the person had received all possible plastic surgery and that her/his appearance had been maximally improved. Both conditions would be asked to fill in the EPS questionnaire. Although the second condition is similar to that of Condition 1 in this study, there are two important differences. First, subjects would be explicitly informed that appearances could not be improved through additional

plastic surgery. It might even be appropriate to explain that what is wanted are baseline scores that represent how subjects rate the person when there can be no further improvements through surgery and that these results will be used in future research. This was not done in Condition 1 in the present study. Secondly, in the present experiment, subjects were asked to complete the EPS attempting to ignore the information presented about the history of plastic surgery. This means that although subjects had been informed that all surgery had been completed during the first part of the study, they attempted to ignore this information and were even told that this information may not be accurate when completing the EPS. Thus, Condition 1 does not satisfy the requirements for a condition necessary to examine this hypothesis adequately.

This is an important hypothesis, for if people do hold unrealistic expectations of plastic surgery they may be less understanding or accepting of people with visible disfigurements. As discussed in the literature review, the reactions of others is an important determinant of how well the burned or disfigured person adjusts to her/his appearance and the attitudes of others influences the self-concept and self-esteem of the disfigured person. Unrealistic expectations of plastic surgery may negatively effect how people react to the burned person, which in turn will negatively effect the self-concept of that person. If

it becomes clear that people in general do hold unrealistic expectations of plastic surgery, then it may be possible to intervene effectively, perhaps through media and schools, to alter these overly high expectations.

Hypothesis Two

The second hypothesis, that as responsibility assigned to the disfigured person for her deviant appearance increases the evaluation of that person will become more negative, was supported by a significant overall MANOVA ($P > F = .0001$). This suggests that as people hold the disfigured person more responsible for her appearance, their evaluations of her will change. In order to discover where the significance occurs and in what directions, it is necessary to conduct post hoc tests and then consider the sample means of each group.

It had been proposed that subjects in Condition 1 would evaluate the disfigured person least negatively and that subjects in Condition 2 would assign her the most negative ratings. An examination of descriptive statistics, in particular the means of each condition, in general supports this suggestion. On the measures Social Stimulus Value scale (SSV), Attitude and SD, Condition 2 received the highest (or most negative) mean scores. This was not true for the Behavioural measure (Behav), where Condition 3 had

the highest mean. Condition 1 had a lower mean score than Conditions 2 and 3 on all variables as expected. There was one notable and consistent exception to the hypothesized pattern in that Condition 4 had relatively less negative ratings. In fact, on variables SSV, Attitude and Behav, Condition 4 had the lowest means or the least negative evaluation of the disfigured person (means are presented in Table 2).

Although these findings are interesting and somewhat useful, any variation between the various means may simply be due to sampling error or individual differences, that is, they may not represent statistically significant differences. It is necessary to use other tests to determine if any of these differences reach significance. Scheffe and Tukey tests were used to follow-up the significant MANOVA. These tests identified significant differences between some of the conditions only for variables Attitude and SD (see Table 1). This indicates that there were no significant differences between any conditions in the way subjects responded on the variables SSV and Behav. It may be that these two measures were tapping different information than the variables Attitude and SD. If this were true, then it suggests that although subjects devalue the disfigured person, they do not feel the need to maintain social and physical distance from her. Although this is a possible explanation, it could also be

that these measures were not effective instruments for the purposes of this study. In particular, the Behav measure should be questioned. First, it has not been used in previous research or compared with other instruments that purport to measure behavioural responses. Secondly, the subjects could only receive scores of; (a) 1 - would meet with person and checked a given date, (b) 3 - would meet with person, did not check a given date but did list alternative time, (c) 5 - would meet with person but did not check given time or list alternative, and (d) 7 - would not meet with person. These discrete values may have been insensitive in detecting the range of willingness-unwillingness to meet with the person. Thirdly, the instructions given to subjects when they were filling in the questionnaire could be improved. In the study, subjects were told that they could meet with "Lynn" to discuss her experiences of being burned. In retrospect, it is recognized that more appropriate instructions would have been simply that there were times available to meet with Lynn to see how accurate their first impressions of her had been. Thus, it is suggested that results on the variable Behav be viewed cautiously.

Although significant differences were identified for both Attitude and SD variables, these differences were not the same for the two variables and must be examined separately. The significant differences on variable Attitude lie between

Condition 4 and each of the other conditions. No comparisons between Conditions 1, 2 or 3 proved to be significant. This suggests that for variable Attitude, the important difference between conditions is whether or not information about the person's history of plastic surgery is presented to the subjects. By considering the means, it is shown that when subjects do receive information about plastic surgery, they rate the person more negatively.

A different pattern of significant differences was identified for variable SD. In this case, the only significant differences appeared between Condition 2 and each of the other conditions. The identified differences were as hypothesized, that is that subjects in Condition 2 evaluated the disfigured person more negatively than subjects in any other condition.

These results are complex and difficult to interpret. Hypothesis two proposed that subjects in Condition 2 would evaluate the disfigured person most negatively and Condition 1 would evaluate her least negatively; further, Condition 4 would be rated more negatively than Condition 3 and less negatively than Condition 2. The findings partially support this hypothesis since it was found that for variable SD, Condition 2 did assign more negative scores than any other group. This Condition was significantly more negative than the other three conditions. In addition, the trends of the sample means for variables SSV, Attitude and SD all suggest

that subjects in Condition 2 devalued the disfigured person more than subjects in any other group. This supports the view that when subjects believe the disfigured person has opted out of further plastic surgery due to an internal reason (i.e., fear), she will be held most responsible for her appearance and devalued the most. As discussed in the introductory literature review, attribution research supports this result since findings from different authors suggest that the presence of an internal cause for misfortune increases the blame assigned to the person (for example, Kelley, 1980; Fincham, 1982). Subjects in Conditions 1 would rate the person less negatively than in Condition 2 since the person has attempted to improve her appearance. MacGregor (1974) has suggested that when a disfigured person is seen to be improving her/his appearance, even if appearances become somewhat more deviant because of the intervention, people tend to be more accepting and tolerant of the deviant appearance. In Condition 3 the cause for opting out of surgery was based on an external reason (i.e., cost). In this condition, subjects would be expected to devalue the person less than in Condition 2 since the presence of an external cause decreases the responsibility or blame assigned to a person (Fincham, 1982).

From the perspective of the Just World Hypothesis (Lerner, 1966), in Condition 1 subjects feel the least need

to devalue the disfigured person since she has already been compensated for her misfortune through plastic surgery. Since some recompense has been received, subjects can maintain a sense of fairness and they do not need to devalue her in order to restore balance to their view of a just world (Lerner and Miller, 1978). In Condition 3, subjects recognize that some compensation has occurred but has arbitrarily been inhibited because of external forces. Since subjects cannot offer the person the necessary funds to complete treatment and allow for full compensation, there is some need for them to devalue her and believe that somehow she deserves or is responsible for her fate although her apparent desire to improve her appearance may lessen this devaluation somewhat. In Condition 2, negative ratings increase since the disfigured person is both responsible for her appearance and not fully compensated for her misfortune. Negative attributions will be assigned both because she has consciously decided to remain deformed and is thus responsible for her appearance and because she has not been fully compensated for her misfortune. This may be similar in some ways to the martyr conditions described in Lerner and Simmons' (1966) study. In the martyr condition, where the confederate is responsible for her continued suffering, subjects devalued her the most. Perhaps this is comparable to this situation where the disfigured person has the power to improve her disfigured appearance (from the subjects' perspective) yet allows her suffering to continue.

The second hypothesis also proposed that there would be a significant difference between Conditions 1 and 3, with subjects rating the person less negatively in Condition 1. There was no such significant difference identified, although the trend in the data does show this relationship. This may be because subjects respond similarly to the person in either condition. Although the information provided is different in Condition 1 and 3, no significant difference may occur because subjects feel that in both instances the disfigured person has undertaken some corrective surgery and she wants to maximally improve her appearance. The intent may be more important than actual behaviour, and therefore there is no clear difference between these two conditions.

Although this may explain the lack of significant difference between Conditions 1 and 3, it does not consider the trend in the data for subjects to rate the disfigured person less negatively in Condition 1 than 3. This difference in means may be due to chance, but it is an interesting trend that should be incorporated into any discussion of the results. A possible explanation could be that although the intent being similar causes subjects to respond in somewhat like manners in both conditions, the need to maintain a view of a just world may lead some subjects to devalue the person more in Condition 3 than in 1 since she has not been fully compensated for her misfortune. The manipulation of the independent variable (varying the

amounts of information concerning the history of plastic surgery) could be ineffective due to large individual differences between subjects in both conditions. Perhaps subjects vary in how strongly they believe in a just world and this may influence the means, i.e., Condition 3 mean might be inflated and/or Condition 1 mean would be depressed. For subjects who are strong just world believers, the intent to improve appearances is not as important as the need to restore balance. Since the disfigured person in Condition 3 cannot be fully compensated, she must be devalued. Varying subject characteristics, such as degree of belief in a just world, may offer insights into the differences between these two conditions.

Hypothesis two is in part not supported since on variable Attitude subjects in Condition 4 evaluated the disfigured person less negatively than in all other conditions. The trend in the data of sample means for variables SSV, Attitude and Behav mirror this finding that subjects in Condition 4 devalue the person less than in any other condition. This was an unexpected result. As already discussed in regards to hypothesis one, this pattern of responding could have been due to subjects feeling obligated to compensate the victim for her misfortune. Therefore, subjects may have rated her more positively. In Conditions 1, 2 and 3 the information provided about her history of

plastic surgery may lessen the need to be "nice" to her since she is no longer seen as a helpless victim but has benefitted (or decided not to benefit further) from plastic surgery. There are examples of this need to compensate someone for her/his misfortune by rating them overly positively (Ray, 1946 cited in Wright, 1960; Kleck, 1968) or by assisting them in some way (Doob and Ecker, 1970; Shaw, et. al., 1980).

Hypothesis two had proposed that unrealistic expectations of plastic surgery would lead subjects to devalue a person when no information was given about past surgical interventions (Condition 4) as they would assume that more could be done to improve appearances and the person had for some reason decided to remain deformed. This does not appear to be the case. However, the problem may be that in each condition there were similar distributions of subjects who had unrealistic expectations of plastic surgery. It had been thought that receiving the information about surgical interventions would affect the expectations of plastic surgery that the subjects held. This manipulation may not have been effective in creating different levels of expectations congruent with the information presented. In Condition 1 especially this could present a problem since if the expectations of plastic surgery were unrealistic even with the information manipulation (i.e., told all plastic surgery completed) then it could be that the information did

not greatly alter the subjects' preconceived expectations of surgery. Subjects, despite being told all plastic surgery had been completed, might still expect that more could be done to improve her appearance. Whether this did occur cannot be investigated since subjects in this study were told to ignore the information concerning plastic surgery presented when filling in the EPS. If subjects had not been told to ignore this information it would have allowed for a check to ensure that the information given was understood by subjects and impacted on their expectations.

It is not clear why on variables Attitude and SD different significant group comparisons were obtained. In some way, these two variables appear to be tapping different information. Yet, it is difficult to determine what this different information was since theoretically the two scales should produce similar results. Perhaps the inclusion of ratings of a friend on the SD scale modified subjects' responses concerning the disfigured person. The component scores of SD did produce a significant MANOVA, with differences being identified between Conditions 1 and 2 for SDE (the evaluative component) and between Conditions 2 and 3 for SDE and SDP (the potency component). Although SDE is basically an attitude scale, the pattern of differences it indicates is not similar to that of Attitude. It may be that the potency and activity component questions influence the way in which subjects respond to the evaluative

component questions. These significant differences between conditions based on the component scores do not lend much information to the interpretation of the other variables, but seem to reflect the same patterns, that of Condition 2 subjects evaluating the disfigured person more negatively than the subjects in other Conditions.

In future research it might be most appropriate to decrease the number of dependent variables both to increase control and to facilitate interpretation of the results. This study may have been undertaking an excessive amount for preliminary research and the complex design and analyses may detract from potential insights into the questions raised. In addition, a check on the responsibility assigned to the disfigured person would verify that the four manipulations of information did in fact succeed over the conditions in changing the levels of assigned responsibility as hypothesized. In retrospect, the inclusion of such a measure may have greatly enhanced the interpretation of the results.

Hypothesis 2 was partially supported by the findings in that for variable SD, Condition 2 did assign more negative scores than subjects in the other conditions. It was also found, however, that for variable Attitude, Condition 4 produced the least negative ratings of all other conditions, a finding that was unexpected. Overall, it is difficult to interpret these results because of the complexity of the

analyses and difficulty in methodology. Still, interesting trends are identified that should be further investigated to further clarify the variables that govern how people react to the facially disfigured. Ultimately, this type of information may be important because it could lead to greater acceptance and understanding.

Hypothesis Three

The third hypothesis proposed that people with high expectations of plastic surgery would assign more negative attributions to a disfigured person than people with lower expectations of plastic surgery. Three conditions were created based on an arbitrary division of scores on the EPS. The three groups were; (1) Low expectations - scores ranged between 0-7 inclusively, (2) Moderate expectations - scores ranged between 8-12 inclusively (called Mod), and (3) High expectations - scores ranged from 13 and above. This hypothesis was supported by an overall significant MANOVA ($P > F = .0023$). This suggests as the expectations of plastic surgery change, so do the attributions assigned to a facially disfigured person. The examination of group means for each variable and further post hoc tests help to identify where the significance reported by the MANOVA occurred.

For all four variables, the sample means demonstrated the same trend, that of subjects in Condition Low evaluated the disfigured person less negatively than Conditions Mod or High and the subjects in Condition High devalued her more than the other two conditions. Although the pattern is seen in variable Behav, the sample means are extremely similar varying between 5.533 for Condition Low and 5.800 for Condition High. The inability of Behav to distinguish between these three conditions may be due to the problems with this variable as discussed under hypothesis two.

The use of the Scheffe and Tukey tests allows for the identification of differences between these sample means that appears to be significant, that is not due to error or chance. For both variables SSV and Attitude, Condition Low was found to be significantly different from Condition High and Condition Mod was significantly different from Condition High. In considering variable SD, the only significant difference lay between Conditions Low and High. Examination of sample means demonstrates that these differences were in the expected direction, that is Condition Low had the lowest means or least negative ratings and Condition High had the highest means. These findings support the hypothesis in general. Significant differences were not identified between Condition Low and Mod for these three variables which suggests that subjects in these two conditions are not that different in the way they respond to the disfigured

person. This could in part be due to the manner in which subjects were assigned to the three conditions. Potentially, many subjects in Condition Low may have scores around 5 or 6 which would not allow for much differentiation between the Mod Condition where scores range from 8-12.

The results support hypothesis three that as expectations of plastic surgery increase, the attributions assigned to a disfigured person will become more negative. This is an important finding since it suggests that part of the reason people devalue a disfigured person is because of unrealistic expectations of plastic surgery. This suggests that public education concerning the limitations of plastic surgery may decrease these unrealistic expectations and decrease the devaluation of the disfigured in society.

Although these results seem clear, caution must be used in reaching any conclusions because of the design used in testing this hypothesis. A major flaw is that the unequal number of subjects in each cell may allow for the violation of the assumption of homogeneity of the variance-covariance matrix underlying the MANOVA test. In future research, it would be useful to screen subjects using the EPS and divide them into groups based on these scores. This would allow for equal cell sizes and also give the opportunity to define in a more controlled manner the scores on the EPS that would result in assignment to the different conditions.

Summary

The overall conclusions of this study would be that expectations of plastic surgery do vary between people and that these expectations do influence how people respond to a facially disfigured individual. Despite some methodological weaknesses, this research strongly suggests that expectations of plastic surgery are unrealistic and that these unrealistic expectations do contribute to less favourable attitudes towards a disfigured person.

In general, it also appears that when people are informed about a disfigured person's history of plastic surgery, this information may impact on how they evaluate the person. The just world hypothesis and attribution research were used to explain the findings. It appears possible that when people are informed about a disfigured person's history of plastic surgery, they feel less need to compensate the person who has already received some compensation from medical science in the form of reconstructive surgery. When no information is available about past interventions, the subjects tend to rate the person less negatively in order to compensate for the misfortune.

The need to restore balance to maintain a view of a just world is not the only contributory factor in the ratings assigned to a disfigured person. Another factor that influences people's attitudes appears to be how responsible

the disfigured person is held for her/his appearance; specifically, how responsible the person is seen for not improving one's appearance through plastic surgery. As a person is held more responsible for the deviant appearance, the attributions assigned to her/him will become more negative.

This study represents a preliminary exploration of an interesting, complex and important area of research. It has identified many new questions to be addressed and it offers ideas on how to improve methodology in future work.

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Appendix A

INSTRUCTIONS

This study is to consider the ability of people to make decisions regarding a person's characteristics based on limited information. People engage in this activity continually and this study is to consider whether or not people's assumptions are accurate. Many groups of subjects will be tested over the next weeks in this study so we remind you not to discuss this experiment with anyone else. Since each group is presented with a person to assess, you may unfairly bias other subjects by discussing your experiences with them. In a moment, I will show you a slide of a person, let you read a brief description of her and then ask you to go through the package of questionnaires (ones not in envelopes) and quickly fill in each one.

Please note:

1. Answer all questions. It may be difficult, but there are no "right" answers, so do try. We want your opinions based on the limited information you are presented with.
2. Be honest. Present your real impressions and not what you think we are looking for.
3. Circle only one number on the scale for each question. Circle a number and not some point in between two numbers.
4. There are 6 pages in this package - make sure you have all six.

Please note also that the third and fourth questionnaires use the same instructions. The third asks you to rate a "friend of yours" and the fourth one asks you to rate the person on the screen. When rating a friend, do not think of one friend in particular, but of what qualities you look for in friends in general.

The last page offers you a chance to meet Lynn. If you are interested, check YES and then see if any of the three general times are appropriate for you and rate them in order of preference. If you have a better time period for meeting with Lynn, put it in OTHER. I will set up final times and rooms and post these on my office door. If you want to meet with Lynn, it will NOT count as an additional experimental credit.

Now please consider the slide being presented. This is Lynn. If you look at the first page of the package of materials given (labelled BIOGRAPHICAL INFORMATION) you will find a brief description of Lynn. Please read this carefully and then fill in the next 5 pages of questionnaires. Feel free to consult the biography or picture when filling in the questions. But don't deliberate too long or flip back and forth between questionnaires. Remember, we want your first impressions.

Time is given for subjects to complete these questionnaires. The forms filled in will include the Social Stimulus Value scale, the Impressions scale, the Semantic Differential scale and the behavioural measure. When everyone is finished, the next set of instructions are presented.

Thank you for filling in these questionnaires. We now have 2 more brief questionnaires and one short demographic sheet for you to complete. These are in the envelopes. Please note that on the second questionnaire (last sheet) you should ignore the information you received about Lynn in the first part of this study. Judge Lynn as you would without knowing anything about her past history. On the end and back of the last sheet there is room for your comments and any guesses about the hypotheses that you have. Please remain so that the study may be briefly explained to you.

Time will be given for subjects to fill in the required demographic material, the scale to assess the impact of the disfigurement, and the Expectations of Plastic Surgery scale. When completed, a debriefing will occur for all subjects.

Appendix B

BIOGRAPHICAL INFORMATION

All Conditions:

(N) is a 22 year old lab technician in Winnipeg. She was born in 1963 in a small town in southern Manitoba. When she was 7, she was severely burned in a fire. Soon after, her family moved to Winnipeg. (N) did quite well throughout school. She graduated from high school 4 years ago and took a course at Red River Community College to become a lab technician. She now works in a lab, a job which she likes but has considered leaving to return to university. (N) is single and lives in a multi-person dwelling. She is basically in good health,

(Each subject receives ONE of the following:)

Condition 1: although as part of her treatment after the fire, (N) had plastic surgery. She has just undergone the final operation in the series of treatments.

Condition 2: although as part of her treatment after the fire, (N) had plastic surgery. Although there are more operations available to (N), she has decided not to continue in treatment because of her fear of surgery.

Condition 3: although as part of her treatment after the fire, (N) had plastic surgery. Although there are more operations available to (N), she has decided not to continue in treatment because of the high cost of the surgery, both in terms of actual price and time lost at work.

Condition 4: No additional information given.

All Conditions: Her interests include reading, tennis and music.

Appendix C

For each of the following questions, check the point (a number at or between the numbers 1 to 7) that best describes how you feel about the statement in relation to the person shown in the picture.

1. How would people in general react to this person after a brief acquaintance in terms of getting to know her better?

1	2	3	4	5	6	7
prefer not to			no preference			intensely interested

2. How easily would this person fit in with your friends?

1	2	3	4	5	6	7
not easily			so-so			sought out

3. Some people are able to gain the admiration and respect of others very easily and other people are not. How easily can this person?

1	2	3	4	5	6	7
very easily			about average			very difficult

4. Some people are able to gain affection or liking from others very easily and other people are not. How easily can this person?

1	2	3	4	5	6	7
very easily			about average			very difficult

5. From the impression this individual gives, how easily will she be able to get the things she wants out of life?

1	2	3	4	5	6	7
will not come easily			about average			will come easily

For each of the following questions, check the point (a number at or between the numbers 1 to 7) that best describes how you feel about the statement in relation to the person shown in the picture.

1. How would people in general react to this person after a brief acquaintance in terms of getting to know her better?

1	2	3	4	5	6	7
prefer not to			no preference			intensely interested

2. How easily would this person fit in with your friends?

1	2	3	4	5	6	7
not easily			so-so			sought out

3. Some people are able to gain the admiration and respect of others very easily and other people are not. How easily can this person?

1	2	3	4	5	6	7
very easily			about average			very difficult

4. Some people are able to gain affection or liking from others very easily and other people are not. How easily can this person?

1	2	3	4	5	6	7
very easily			about average			very difficult

5. From the impression this individual gives, how easily will she be able to get the things she wants out of life?

1	2	3	4	5	6	7
will not come easily			about average			will come easily

Appendix D

please circle the number that best describes the person shown in the picture based on your first impressions. We want to know your impressions of this person based on limited information. There are no right answers. Please be sure to circle a response for each question.

Intelligent 1	2	3	4	5	6	Unintelligent 7
Sincere 1	2	3	4	5	6	Insincere 7
Irresponsible 1	2	3	4	5	6	Responsible 7
Likeable 1	2	3	4	5	6	Unlikeable 7
Unattractive 1	2	3	4	5	6	Attractive 7
Warm 1	2	3	4	5	6	Cold 7
Unfriendly 1	2	3	4	5	6	Friendly 7
Approachable 1	2	3	4	5	6	Unapproachable 7
First impression 1	2	3	4	5	6	Good first impression 7
Helpful 1	2	3	4	5	6	Selfish 7
Unpleasant 1	2	3	4	5	6	Pleasant 7
Sociable 1	2	3	4	5	6	Unsociable 7
Submissive 1	2	3	4	5	6	Assertive 7
Moody 1	2	3	4	5	6	Good-natured 7
Happy 1	2	3	4	5	6	Unhappy 7

Appendix E

Please circle the number that best describes how you feel about the question asked. Do not leave any out. Do not circle more than one number for any question. Please do not look back and forth through the pairs of words on the two pages of this questionnaire, and do not try to remember how you marked the questions earlier. Work at a fairly high speed. Do not worry or puzzle over individual items. It is your first impressions, your immediate feelings that are needed.

How Would You Generally Describe a Friend of Yours?

pleasant 1	2	3	4	5	6	Unpleasant 7
Relaxed 1	2	3	4	5	6	Tense 7
Slow 1	2	3	4	5	6	Fast 7
Large 1	2	3	4	5	6	Small 7
Dirty 1	2	3	4	5	6	Clean 7
Dull 1	2	3	4	5	6	Sharp 7
Kind 1	2	3	4	5	6	Cruel 7
Strong 1	2	3	4	5	6	Weak 7
Good 1	2	3	4	5	6	Bad 7
Light 1	2	3	4	5	6	Heavy 7
Unaffectionate 1	2	3	4	5	6	Affectionate 7
Rough 1	2	3	4	5	6	Smooth 7
Attractive 1	2	3	4	5	6	Unattractive 7
Cowardly 1	2	3	4	5	6	Brave 7
Active 1	2	3	4	5	6	Passive 7

How Would You Describe this Person?

pleasant 1	2	3	4	5	6	Unpleasant 7
Relaxed 1	2	3	4	5	6	Tense 7
Slow 1	2	3	4	5	6	Fast 7
Large 1	2	3	4	5	6	Small 7
Dirty 1	2	3	4	5	6	Clean 7
Dull 1	2	3	4	5	6	Sharp 7
Kind 1	2	3	4	5	6	Cruel 7
Strong 1	2	3	4	5	6	Weak 7
Good 1	2	3	4	5	6	Bad 7
Light 1	2	3	4	5	6	Heavy 7
Unaffectionate 1	2	3	4	5	6	Affectionate 7
Rough 1	2	3	4	5	6	Smooth 7
Attractive 1	2	3	4	5	6	Unattractive 7
Cowardly 1	2	3	4	5	6	Brave 7
Active 1	2	3	4	5	6	Passive 7

Appendix F

(N) is willing to come in and meet with small groups of people to talk about her experiences as a result of the burn injury and to answer any questions you might have. We would like to know if you would be interested in meeting with her within the next few weeks.

Would you be interested in attending a small meeting with (N)?

Yes _____

No _____

Days that I would be available:

Date 1 _____

Date 2 _____

Date 3 _____

Other _____

(Indicate which is the best
in order of preference.
If you are interested but
none of these dates are
suitable, please indicate
a better time in the
Other section.)

A list of locations and exact times will be posted outside P228 Duff
Roblin after (Date).

Thank you for your participation in this study.

Appendix G

Please read each of the following statements and use the 1 to 7 point scale listed below to indicate how you feel, for each of the questions, about the person in the picture.

Rating Scale:

1	2	3	4	5	6	7
None			Moderate			Very Large

- _____ 1. Extent of disfigurement.
- _____ 2. Impact of disfigurement on face.
- _____ 3. Impact of disfigurement on social contact.
- _____ 4. Impact of disfigurement on job.
- _____ 5. Impact of disfigurement on marriage.
- _____ 6. Impact of disfigurement on self-concept.

Please remember that there are no correct answers. We want to know your impressions, so try to answer each question as best describes your impressions of the person presented in the picture.

Appendix H

Appendix H

PLEASE READ EACH OF THE FOLLOWING STATEMENTS AND CIRCLE THE NUMBER THAT BEST DESCRIBES HOW YOU FEEL ABOUT THE PERSON SHOWN IN THE SLIDE. PLEASE IGNORE THE INFORMATION PRESENTED IN THE FIRST PART OF THIS STUDY CONCERNING THE PERSON'S PAST HISTORY OF PLASTIC SURGERY. THIS INFORMATION MAY NOT HAVE BEEN ACCURATE. INSTEAD TRY TO ANSWER THE QUESTIONS AS YOU WOULD WITHOUT HAVING ACCESS TO THIS INFORMATION.

1. WHAT WOULD YOU ESTIMATE TO BE THE EXPECTED LEVEL OF THIS PERSON'S ATTRACTIVENESS AS COMPARED TO OTHER PEOPLE IN GENERAL (WHERE 7 REPRESENTS AN IDEAL LEVEL OF ATTRACTIVENESS)?

1	2	3	4	5	6	7
UNATTRACTIVE			AVERAGE: ABOUT THE SAME AS MOST PEOPLE			VERY ATTRACTIVE (IDEAL ATTRACTIVENESS)
2. HOW MUCH MORE DO YOU BELIEVE THIS PERSON'S APPEARANCE COULD BE IMPROVED THROUGH PLASTIC SURGERY?

1	2	3	4	5	6	7
A GREAT DEAL			SOMEWHAT			ONLY A LITTLE
3. HOW MANY MORE OPERATIONS DO YOU ESTIMATE THIS PERSON WILL REQUIRE FOR HER APPEARANCE TO BE IMPROVED MAXIMALLY?

0-1	2-3	4-5	6-7	8-9	10-11	11 OR MORE
-----	-----	-----	-----	-----	-------	---------------
4. WHAT WOULD YOU ESTIMATE AS THE PRESENT EXTENT OF THIS PERSON'S DISFIGUREMENT?

1	2	3	4	5	6	7
NONE			MODERATE			VERY LARGE
5. WHAT WOULD YOU ESTIMATE TO BE THE EXPECTED LEVEL OF DISFIGUREMENT AFTER ALL POSSIBLE PLASTIC SURGERY IS COMPLETED?

1	2	3	4	5	6	7
VERY LARGE			MODERATE			NONE
6. AFTER ALL POSSIBLE PLASTIC SURGERY IS COMPLETED, WHAT WOULD YOU ESTIMATE TO BE THE EXPECTED LEVEL OF THIS PERSON'S ATTRACTIVENESS AS COMPARED TO OTHER PEOPLE IN GENERAL (WHERE 7 REPRESENTS AN IDEAL LEVEL OF ATTRACTIVENESS)?

1	2	3	4	5	6	7
UNATTRACTIVE			AVERAGE: ABOUT THE SAME AS MOST PEOPLE			VERY ATTRACTIVE (IDEAL ATTRACTIVENESS)

ANY COMMENTS ABOUT THE STUDY OR GUESSES AT THE HYPOTHESES WE ARE CONSIDERING CAN BE WRITTEN HERE. THANK YOU FOR YOUR ASSISTANCE.

Table 1

Table 1
Scheffe and Tukey Test of
Dependent Variables by Condition (alpha = .05)

Variable	Significant Comparisons Between Conditions
Attitude	2 - 4 3 - 4 1 - 4*
SD	1 - 2 2 - 3 2 - 4*

* Significant for Tukey test only.

Table 2

Table 2
Means and Standard Deviations of
Dependent Variables by Condition

Variable	Condition	Mean	Standard Deviation
SSV	1	19.816	3.817
	2	20.388	8.103
	3	20.061	8.147
	4	19.163	2.405
Attitude	1	50.796	4.261
	2	52.347	10.545
	3	51.939	13.819
	4	45.510	2.439
SD	1	64.204	4.079
	2	71.837	8.987
	3	64.245	9.888
	4	66.184	2.121
Behav	1	5.735	3.665
	2	5.735	10.401
	3	6.143	8.536
	4	5.122	2.690

Table 3

Table 3
Scheffe and Tukey Tests of
SDE, SDP and SDA By Condition ($\alpha = .05$)

Variable	Significant Comparisons Between Conditions
SDE	1 - 2 2 - 3
SDP	2 - 3*

* Significant for Tukey test only

Table 4

Table 4
Means and Standard Deviations of
SDE, SDP and SDA By Condition

Variable	Condition	Mean	Standard Deviation
SDE	1	23.694	4.184
	2	27.306	7.709
	3	23.143	6.069
	4	24.632	5.231
SDP	1	18.959	4.103
	2	20.918	4.773
	3	18.735	3.522
	4	19.612	3.622
SDA	1	21.592	3.691
	2	23.408	3.968
	3	21.959	3.651
	4	22.163	2.868

Table 5

Table 5

Scheffe and Tukey Tests of Dependent
Variables By Expectation ($\alpha = .05$)

Variable	Significant Comparisons Between Expectation Groups
SSV	Low - High Mod - High
Attitude	Low - High Mod - High
SD	Low - High*

*Significant for Tukey test only

Table 6

Table 6
Means and Standard Deviations of
Dependent Variables By Expectation Groups

Variable	Group	Mean	Standard Deviation
SSV	Low	18.956	3.561
	Mod	19.441	3.775
	High	22.025	4.191
Attitude	Low	46.667	9.108
	Mod	49.995	9.539
	High	54.600	10.160
SD	Low	64.489	11.204
	Mod	66.225	9.006
	High	70.100	13.679
Behav	Low	5.533	2.608
	Mod	5.703	2.407
	High	5.800	2.345