THE RELATIONSHIP BETWEEN
SENSORY STIMULUS AND LEISURE MEMORY

by

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Dedication

In loving memory of my husband

Arnold A. Snyder

for his gentle strength.

TABLE OF CONTENTS

Table of Contents	v
Abstract	viii
Acknowledgements	ix
Chapter 1	1
Introduction	1
Leisure Defined	2
Memory Defined	2
Aroma Defined	2
Senior Defined	3
Purpose of the Study	3
Chapter 2	4
Review of Literature	4
Leisure Satisfaction	5
External Stimulus	6
Olfactory Sense	7
Memory	10
Senior Women	13
Leisure and Women	13
Chapter 3	15
Methodology	15
Qualitative Approach	16
Interview Process	17

Population	17
Location	18
Setting	18
Data Collection	18
Data Analysis	19
Ethical Considerations	20
Chapter 4	21
The Interviews	21
Introduction	21
Ms. L.	22
Ms. M.	30
Ms. C.	38
Ms. W.	49
Ms. B.	56
Ms. A.	63
Ms. J.	69
Chapter 5	79
Discussion	79
Identification of the Themes and Development of the Model	79
The Model	79
Discussion of Themes Within the Model	82
Comparison of the Interviews	90
Conclusion	95
Future Research	98
Recommended Program	98

Appendix A - Interview Guide	101
Appendix B - Letter of Consent	102
Appendix C - Interview Logs	103
References	135

Abstract

Leisure has been examined from a variety of perspectives: social, social psychological and psychological perspectives (Mannell, 1983, Iso Ahola, 1980; Kaplan, 1975). The examination of leisure has often focused on the frequency of participation from an androcentric perspective. A variety of authors have recently examined how women perceive leisure (Bialeski & Henderson, 1986; Henderson, 1994). Other authors have examined the context of a leisure experience rather than the frequency of involvement (Harvey & Singleton, 1995). Various authors have examined leisure memory using reminiscence (Tabourne, 1991; Weiss, Blake & Kosciansher, 1991). How the senses affect a leisure memory has not been examined. The purpose of this study is to examine how sensory stimulus affects leisure memory.

Oral sources of information will be used in this study to explore the question: Does the presentation of a positive aroma enhance the leisure memory of older women? This method will allow the gathering of retrospective and contextual information about the role of instant sensory stimulus on memory's imprint. The data will be derived through the words spoken, the intonation and the body language of the subjects. This research will allow for a better understanding of the interaction between present sensory stimuli and leisure memory of the senior woman, and at the same time open up an increased awareness of memory's role in living more fully in the senior years.

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With unlimited loving gratitude to my children:

Barbara
Arnold
Elizabeth
Karen

They were there when Joy! arrived and with unfailing, loving support they helped it become "enthusiasm for being alive!"

To my grandchildren,

Derek
Jason
David
Shawna

Thank you so very much for being there with your thoughtful consideration and boundless energy.

Chapter 1

Introduction

Prior to the mid 1970s, research in the area of leisure and aging focused on retirement, leisure patterns of older individuals, and leisure as a variable of aging. MacNeill (1987) indicated that the last decade saw a surge of articles on retirement and leisure participation patterns of older individuals and a proliferation of articles on life satisfaction and recreation programming. That is, present research reflects past research interests, with the topic of retirement remaining of interest and other leisure related themes becoming prominent. These themes include leisure and life satisfaction and further development of recreation programming. Ragheb and Griffith (1982) and Kelly (1986) suggest there is little scientific research in leisure and aging, and that which does exist is primarily theoretical and descriptive.

The leisure and aging literature has often focused on what activities people participate in (Smale & Zuzanek, 1993; Singleton, 1984), not in what the activity means to the person. The context of the experience, who the person participates with, where the person participates, when the person participates, why a person participates and what stops a person from participating has recently been examined in the literature (Zuzanek & Smale, 1993; Harvey & Singleton, 1995). While authors have begun to examine the context of the experience on older persons, an area that needs further exploration is how a person remembers the context of an experience after he or she has participated in an activity.

Kaplan (1975) indicates there are three components of an experience: anticipation, the experience, and reflection on the experience. How do people reflect on an experience? What effect do the senses (sight, hearing, smell, taste and touch) have on a person in the actual experience of an event and in the memory of the experience?

This research project intends to examine how aromas affect leisure memory of older women. In order to examine these areas, it is necessary to clarify the meaning of the variables.

Leisure Defined

In defining leisure, Heywood (1979) states that the leisure activity itself is neutral until the person brings his or her own awareness to the activity. After considering the activity's neutrality, then the individual's attitude toward the activity determines its meaning at this point in his or her own life stage (Ragheb & Griffith, 1982). In addition leisure research cites that the qualities of enjoyment/fun (Roadburg, 1983), enjoyment, self-fulfillment (Child & MacMillan, 1973), and enjoyment, freedom of choice and relaxation (Shaw, 1985), indicate that the participants themselves were the decision-makers. It appears that the personal attitude of a participant toward an activity is governed by the above characteristics.

Memory Defined

Memory is a personal record of an event which occurred at a previous time in the life of that individual (Ashcraft, 1989). This factual or emotional event, although it is classed as having occurred in the past, may still be accessed and reviewed in the present moment (Cohen, 1989).

Aroma Defined

An aroma is a collection of volatile oils, present in the external environment, which when breathed into the nose, stimulates the olfactory sense, resulting in brain sensations and perceptions (Smith, 1989).

Senior Defined

For the purpose of this research, the sample population consists of healthy alert women 59 years of age and over. Research indicates women have a heightened sensitivity to aroma and a more vivid recall for odour-evoked memories (Herz & Cupchick, 1992).

Purpose of the Study

The question being addressed is: Does the presentation of a positive aroma enhance the leisure memory of older women? This topic is of interest since it will provide insight into how a sense may affect a leisure memory. This study will provide insight on the context of reflection (Kaplan, 1975) of a person's leisure experience.

Chapter 2

Review of Literature

A variety of measures are employed when measuring leisure activity participation and leisure satisfaction. However, each type of scale or index utilized has similarities with other scales which have been created. Beard and Ragheb's (1980) Leisure Satisfaction Scale (LSS) appears to be the most popular scale used when measuring the level of leisure satisfaction (Beard & Ragheb, 1980; Ragheb & Griffith, 1982; Riddick, 1986; Sneegas, 1986). The original LSS had 51 items but was reduced to 24 items (Ragheb & Griffith, 1982) and 18 items (Riddick, 1985) to avoid users' haphazard selection of items. This index consists of six component subscales: psychological, educational, social, relaxational, physiological and aesthetic with a five-point scale ranging from "almost never true" to "almost always true". The alpha reliability co-efficients obtained by Ragheb and Griffith (1982), .93 and Riddick (1986), .92 were representative of the reliability of this scale.

A variety of scales have been used in measuring the level of leisure activity participation, but again all leisure activity scales attempt to measure the same concept. That is, the amount of frequency of leisure activity participation in a period of time. Palmore and Kivett (1977) utilized self-reports on the amount of organizational activity (religious services, clubs, unions and associations) participation and the number of social activity hours (attending a sports event, church or other meetings, lectures, volunteering and visiting friends and relatives) in one month. Sneegas (1986) and Steinkamp and Kelly (1985) employed a 4-point scale (a lot, sometimes, seldom, never); while Riddick (1985) utilized a 3-point (hardly any at all, some but not a lot, a lot) Leisure Activities Index and Ragheb and Griffith (1982) employed a 5-point scale (never to very often) developed by McKechnie in 1974. Palmore (1979) used the Cavan Adjustment Rating Scale in determining respondents level of leisure participation.

Research indicates that leisure participation and leisure satisfaction are significant predictors of life satisfaction (Kelly, Steinkamp & Kelly, 1987; Markides & Martin, 1979; O'Brien, 1981; Palmore, 1979; Ragheb & Griffith, 1982; Riddick, 1985; Riddick, 1986; Sneegas, 1986). In fact leisure participation was determined as the strongest predictor of life satisfaction in a number of studies (O'Brien, 1981; Palmore, 1979; Riddick, 1986). McAvoy (1979) compiled a list of leisure activities the elderly identified as one of the top five they participated in during the past year. These were: visiting friends and relatives, watching television, reading, gardening, indoor hobbies, driving for pleasure, walking, indoor games, attending organizational and club meetings and caring for animals. Kelly, Steinkamp and Kelly (1987) identified similar leisure activities which contributed the most to life satisfaction: cultural, travel, social, exercise/sport, outdoor, family and home-based. It would be difficult to conclude what an appropriate level of leisure participation should be. However, Ragheb and Griffith (1982) have concluded that the higher the level of leisure participation, the higher the subsequent level of life satisfaction among the elderly.

Leisure Satisfaction

Leisure satisfaction is also a determinant of life satisfaction, but does not act independently. A number of variables have been identified as influencing leisure satisfaction including gender, knowledge of leisure resources, leisure values, income and leisure attitudes of significant others (Beard & Ragheb, 1980; McGuire, 1984). Riddick (1985) indicated that two leisure variables had a significant positive effect on leisure satisfaction. Knowledge of leisure resources had the most influence on leisure satisfaction, accounting for five percent of the variation in leisure satisfaction score, with leisure values being the second-most influential determinant of leisure satisfaction accounting for nearly four percent of the variation.

Leisure participation and leisure satisfaction are valuable predictors of an individual's level of life satisfaction, though it appears that leisure satisfaction is more

important than leisure participation. Ragheb and Griffith (1982,p. 302) state: ". . . leisure satisfaction contributes much more than mere leisure participation to the life satisfaction of older persons. . . the value of an activity is not only determined by the frequency of engagement in it, but also by its meaning, attitude, quality and state of mind."

The literature in understanding leisure has often been associated with frequency of involvement not in the context of the experience. The question arises, how do the senses affect a person's perception of the experience? What impact do the senses have on the person's perception of the experience? The next section will provide insight on how senses affect a person's perception of the experience and how it affects a person's memory of the experience.

External Stimulus

The Concise Oxford Dictionary (1976, p. 757) defined odour as: "property of a substance that has pleasant or unpleasant or any effect on the nasal sense of smell" (p. 757). In his book "Sensation and Perception", Schiffman (1976) wrote that "natural odours occur as signals for the recognition and location of nutrients and mates" (p. 141) and aids "in food selection, maintenance of clean environment and....pleasant esthetic sensations" (p. 140).

In reviewing the literature on the process of aroma becoming a memory, it appears that the catalysts are originally part of the environment therefore external to the individual. According to Smith (1989) the active substance is contained within oils floating in the atmosphere or enclosed in food or fluid. Every breath is an ever changing collection of chemical molecules transporting vapor clues through the nasal cavity. It is necessary that the oils be volatile or capable of changing into a gaseous state at body temperature in order to dissolve in and become part of the olfactory solution (Smith, 1989).

Before the brain becomes aware of separate aromas (odours) through sensation and perception, the mechanics of the interaction between nose and air requires clarification. In the “Natural History of the Senses”, Ackerman (1990, p. 6) explained it this way:

Breaths come in pairs, except in two times in our lives, the beginning and the end. At birth, we inhale for the first time, at death, for the last. In between, through all the latter of one's life, each breath passes our olfactory sites. Each day, we breathe about 23040 times and move round 438 cubic feet of air. It takes us about five seconds to breathe - two seconds to inhale and three seconds to exhale - and, in that time molecules of odour flood through our systems.

At all times there is an exchange of energy between the individual and the environment (Schiffman, 1976). The world external to the olfactory sense constantly affects each individual's life by the presence or absence of living odours in the surrounding environment. It is chemicals of living nature which emit their odours (Smith, 1989) and even without conscious awareness these odours leave prints on the brain, as indicated by E.E.G. recordings (Klemm, Lutes, Hendrix & Warrenburg, 1992).

Olfactory Sense

The olfactory sense is one of the two chemical senses (Smith, 1989); the other being the sense of taste or the gustatory sense located in the tongue's taste buds (Smith, 1989). However, without an active aromatic sense, food flavours would be limited to the taste buds' choices of sour, sweet, bitter and salt.

In considering the importance of the sense of smell in relation to aroma, memory and the sample population, it appears that most senior women have already created an ample supply of pleasant aromatic memories. In addition they are still capable of creating pleasant aromatic memories every time they selectively sniff with their own functioning olfactory sense, situated in the nasal cavity. Several factors are pertinent to the olfactory sense in relation to its history, location and functions, and its continuing effect on the brain, emotions, memory, and personal identity.

According to Smith (1989) history records that the olfactory sense is an ancient or reptilian sense, and has been pivotal in the survival of humans and many other species. The ability to detect odour has been active in attracting males to females in the propagation of the species; and has functioned as a warning mechanism in identifying predatory animals, tainted food, and water (Freedman, 1991).

The location of the olfactory sense gives it a uniqueness among the senses. Whereas the stimuli for the other four senses are processed through intermediate connections (Gibbons, 1986), the sense of smell has a direct route from the environment to the brain (Freedman, 1991; Gibbons, 1986). The external olfactory bulb dangles in the nasal cavity (Freeman, 1991), and is immersed in the stimulating volatile oils present in each incoming breath (Freedman, 1991). The enclosed chemical stimuli is immediately transported to the internal olfactory bulb, which is suspended between the nasal cavity and the brain (Smith, 1989). The chemical stimuli then transmit messages to the rim or cortex of the brain (Gibbons, 1986), and these messages instantly trigger the brain's activities of sensation and perception which may then be observed on E.E.G. recordings. These recordings are considered a reflection of thought and affective state (Klemm et al., 1992). Although this sequence of events is known to happen, the manner in which it happens is not known (Smith, 1989).

The olfactory sense ensures an instant and continuous supply of odour stimulus to the brain, with its five million active neurons (Freeman, 1991), constantly detecting 10,000 different odours (Ackerman, 1990). These neurons are not only reactivated every time fresh oxygen blows over them but are also renewed every one to two months (Freedman, 1991). In addition, vigorous sniffing increases greater stimulation of sense of smell; this may occur on inspiration during breathing or on expiration during eating (Schiffman, 1976).

In addition to sending factual messages about the odour stimulus, the message may also include the emotions or feelings surrounding the odour event (Ackerman, 1990). Odours become meaningful through association with experience (Smith, 1989). This versatile sense not only sends a continuous supply of odour stimuli to the brain, but at the same time the resultant factual and emotional sensations and perceptions are lodged in memory (Klemm et al., 1992). When this happens the memory of this event is also emotionally charged, “Odours are intimately wired with emotions and memories” (Freedman, 1991). There is almost no short-term memory with odours, they are often saved in long-term memory instantly (Ackerman, 1990). In constantly adding to both the factual and emotional content of brain activity and long-term memory storage, this sense also continues to contribute to the functioning personal identity of the individual (McGraw-Hill, 1987).

In the area of the physical aging of the senses, it is recognized that there is a diminishing of sensitivity of all senses over time. Although this decrease in sensitivity is gradual and different for each sense, it is relentless. It is now considered a debilitating disease of old age along with Alzheimer’s disease and osteoporosis (Olshansky, Carnes & Cassel, 1993). But in the case of the olfactory sense, neurons are replaced at frequent intervals over the lifespan (Gilbert & Wysocki, 1987), which does not occur in any of the other senses (Gibbons, 1986).

Gilbert and Wysocki (1987) concluded “age brought with it little decline in the smell ability among respondents. Detection ability remains near youthful levels well into the seventh decade” (p. 523).

Gilbert and Wysocki (1987) stated “pleasantness ratings of other odours remain constant with age.....it appears a reduced ability to identify odours does not necessarily alter the pleasantness of odours.....a gradual reduction of intensity of odours is a common feature of aging” (p. 522).

In the researching of taste and odour-reactivity in elderly demented patients Perl, Shay, Hiacmburger and Steiner (1992), found “behavioral manifestations of the ability to perceive odours remain preserved” (p. 792) and concluded “the process of taste and odour retention can be considered as almost independent of cognition” (p. 792).

In researching odour-evoked memories in humans, Herz and Cuchik (1992) state “Females described more emotionally intense and clearer memories than did males, and females under the subjective set described the most vivid memories” (p. 519), and go on to say “Given that women show a heightened perceptual sensitivity to direct olfactory experience, it follows that their odour-evoked memories may also be qualitatively more intense” (p. 520).

Memory

According to the McGraw-Hill Encyclopedia of Science and Technology, (1987, p. 584), memory is:

The ability to store and access information that has been acquired through experience. Memory is a critical component of practically all aspects of human thinking, including perception, learning, language, problem solving, and many others. Through its elaborate mechanisms for sorting, organizing, and storing information, memory provides people with the building blocks necessary to structure their knowledge of the world and, ultimately, of themselves.

The importance of memory can be illustrated by its loss. Kandel and Hawkins (1992) state: “Loss of memory leads to a loss of contact with one’s immediate self, with one’s life history and with other human beings” (p. 79).

Before a memory is created, external stimulus is registered by the body’s sensory receptors and is processed through to the brain, immediately becoming sensation and perception (Freeman, 1991). These brain events may be factual or emotional or a combination of these two broad categories. All brain activity becomes a memory, short-term instantly, and then if other factors are present, long-term storage of events may develop (McGraw-Hill, 1987).

According to Ashcraft's (1989) research, it was found that prolonged acquisition, that is "over learning" combined with "time distributed learning" contributed significantly to accurate recall several years later. It also seems "recognition" memory for information acquired over an extended period is generally accurate but "recall" performance starts to decline within months. Most often it is the uniqueness of the event which gives the distinctiveness to a particular memory and which has a remarkable effect on retention and retrieval of long term memory, because it is subsequently described with such accuracy and vividness. From the research, Ashcraft concluded that long term memory may be accessed with the help of time-based cues, and the more unique the original event the easier the memory is to access.

In Cohen's (1989) investigation of autobiographical memory, referred to as self-memory, several observations were noted: the subject, when recalling personal experiences is both the experience and the product of the experience; memories elicited by a time-based cue such as a phrase, smell or movement are often recalled instantly and with clarity. The time element, that is, age at the time of event, lapse of time since the event, and age at the time of recall, is an influencing factor. More recent memories are recalled from the original view point, while older memories are recalled as an external observer. Memorability of an event is affected by the level of personal, physical, and/or emotional involvement at the time of the event and by the individual's state of health and mood both at the time of encoding and recall. Unique experiences with their high emotional content, and other highly emotional experiences are more memorable perhaps because they leave identifiable traces for subsequent retrieval.

Cohen (1989) further stated that personal history provides personal identity. The individual appears to be what he/she remembers, so that a loss of memory due to either trauma or disease may result in partial or complete loss of awareness of personal identity.

In delving into relationships between odours, emotions and memories, Herz and Cupchik (1992) reported “odour evoked memories tended to be highly emotional, vivid, specific, rare, and relatively old. The most familiar odours evoked the greatest number of personal memories. Females described more emotionally intense and clearer memories than did males, and females under the subjective set described the most vivid memories” (p. 519). Intensity of an odour had a bearing on the retention of the memory. The names of recent odours were recalled better than distant odours and names of high intensity odours were recalled better than low intensity odours.

Gibbon (1986) wrote, “The sense of smell is at the heart of remembering and emotion” (p. 332), and “our most elusive sense, smell, reaches more directly into memory and emotions than other senses” (p. 337). He also wrote, “Odours reach into all our emotional life, drawing from the deepest caves of our minds. Odours suggest, stimulate associations, evoke, frighten, and arouse us, but they seem to lie below conscious thought” (p. 327). He then indicates that an odour is perceived as good or bad, depending on the experience associated with the odour at the time of encoding, and the more extreme the feeling associated with the event, the more intense the associated memory.

Reviewing the results of their smell survey, Gilbert and Wysocki (1987, p. 524) stated:

the stronger the odour, the more likely it was to bring to mind a vivid memory. And just as women found all odours stronger, they also reported more memories than men for every odour but gas ... extremely pleasant and extremely unpleasant odours were both more likely to evoke memories than odours with only a so-so rating..... A frequent claim about scent is that it can trigger memory over decades.

In conclusion, memory appears to be an instant, personal record of a past moment with a factual component surrounded by emotional experience. The degree to which the contents are imprinted in memory is directly related to the intensity of the emotions being experienced at that specific moment.

Senior Women

According to Statistics Canada (1994), Canadian seniors are living longer, healthier lives than ever before in the history of this country. Since 1921, twenty years have been added to the lifespan of women while men have gained 15 years. Along with longer physical health, Goleman (1984, p.10), states:

One key mental faculty called crystallized intelligence continues to rise over the lifespan in healthy active people. Healthy in this context means an absence of diseases that affect the brain, such as stroke. Crystallized intelligence is a person's ability to use an accumulated body of general information to make judgments and solve problems..... This increase despite the simultaneous decline from early adulthood onward of 'fluid intelligence', a set of abilities involved in seeing and using abstract relationships and patterns.

Selkoe (1992), indicates, "given enough time and an environment that keeps anxiety at bay, most healthy elderly people score about as well as young or middle-aged adults on tests of mental performance.....one may not learn or remember quite as rapidly during healthy late life, but one may learn and remember nearly as well" (p. 139).

Giambra, Camp and Grodsky (1992) report on another facet of the aging mind. "Perhaps the most important conclusion we can draw from the results of this study and other related studies is that aging does not result in a lessening of information seeking, that is, interest in learning. Older adults need only the opportunity to learn and seek out information that is offered in a form compatible with their preference" (p. 156).

Leisure and Women

Historically leisure has been studied from a male perspective (Bella, 1989; Bialeski & Henderson, 1986; Henderson, 1991). A variety of researchers have illustrated that women have differing leisure experiences than men (Bella, 1989; Bialeski & Henderson, 1986; Henderson, 1991; Keddy & Singleton, 1988; Thiessen & Singleton, 1994). Recent findings indicate women leisure experiences differ from men's in relation to the context of

the experience. Further research into the area of understanding women's leisure and specifically understanding older women's leisure will contribute to the leisure literature.

Hochman (1981), stated “inside a woman’s elderly body is the person of all ages that she has been. The child, the adolescent, the young, and middle-aged adult is the elderly woman” (p. 13).

This study will provide insights on how one sense, sense of smell, enables individuals to remember the context of that experience. This study will provide insights on the context of a leisure memory.

Chapter 3

Methodology

In the selection of the population of senior women and asking the stated question: "Does the presentation of a positive aroma enhance the leisure memory of older women?", requires not only detailed data concerning aroma and leisure memory but also the quality of living time in relation to the life-stages of each senior woman. Therefore, in this study, the senior woman was encouraged to elaborate on her own reflections and thereby her perspective emerged in the research.

Henderson (1991) wrote that the overall view of methodology starts with two distinct paradigms or world views which set the pattern for interpretive or positivist choice in delving into the role of remembered leisure in the lives of senior women. It is the interpretive paradigm which appears to offer a model for allowing the opportunity, "to view human behavior as a product of how people define their world and see reality from another's eyes" (p. 10). While the positivist choice states the importance of "seeking facts or causes of social phenomena, with the contention that the truth can be obtained objectively" (p. 10), in seeking meaning to human behavior by searching another's inner perspective, the positivist view is eliminated while choosing the interpretive paradigm. It is in making this decision that insures the qualitative approach will be used, which in turn affects the selection of not only methodology, methods and techniques, but also the eventual findings and research results.

The question used for this study requires the use of interpretive paradigm. This method will enable the participants' voices to be heard.

Qualitative Approach

The effects of present positive aroma among senior women, the wholeness of a woman's reality in relation to her sense of smell and the growth of her aromatic memory over her lifetime is of primary importance to this study. Through this proposed research study, the participant will be encouraged to remember aromatic moments she has lived and recount these experiences in her own words in a supportive environment. A factor influencing the use of a qualitative approach in this study is the choice of assessing the results in terms of words, not numbers.

The participant's experiences and feelings are accepted as part of the participant's view of the life she has lived or is living. This study is concerned with the participant's point of view, the subjective not the objective slant on her living moments.

The interviewer is also part of the whole environment, not a detached "outsider". It is important in qualitative research to realize the importance of recognizing that it is a factor to be considered at all times. During the interview the researcher focuses on the meaning of what the participant is saying and the conveyance of her thoughts and feelings. While this scene is being played out, the researcher becomes an instrument of data collection and is involved in the interaction with the interviewed person. In addition, although the researcher is in charge of the interview sessions, it is the participant who is the centre of the research, and must be given as much leeway as possible, in regard to open-ended questions, with a minimum amount of guidance. After all, it is her story which is important; without her, there would be limited input for research.

A qualitative approach also ensures the setting of a natural environment, which allows the participant to feel comfortable and at ease during both interviews.

In this study the variables are aroma, leisure memory, and senior women.

Interview Process

In trying to assess the effect of aroma on leisure memory, the following process was used to collect information for this study:

1. A preliminary in-depth interview, asking the participant to recall a pleasant aroma from childhood. An unstructured interview format was used (Appendix A). The woman was the ultimate guide of the interview process. The time allotment for the interview process ranged from one to one and one half hour depending on the interview. The interview was audio and videotaped to ensure that word accuracy, voice inflection, and facial expressions were noted.
2. One to two weeks later, a second interview was scheduled and at that time the aroma was introduced to the woman based upon the information gathered during the first interview.
3. Immediately following the introduction of the aroma the person's response was recorded. The second interview was also audio and videotaped to ensure that word accuracy, voice inflection, and facial expressions were noted. The information from both interviews was analyzed separately to identify themes and behavioral responses. The videotapes and audio tapes were used by the researcher to interpret the responses of the women.

Population

The chosen population for this research study was a sample of older women with grown children. The respondents ranged in age from 59 to 85 years and were living independently. The rationale for selection of this population was as follows:

1. Gender influence in early life may influence the young person's involvement in food preparation.

2. Family responsibilities may have ensured the ongoing involvement in food preparation.

Location

In determining the criteria for location selection for the interview process, a number of factors were considered:

1. A natural setting for both the interviewee and interviewer.
2. A non-threatening environment for the interviewee.
3. A facility that could accommodate the demands of the interview requirements; access to a cooking facility.
4. A pleasant and comfortable setting.
5. A central location in a municipality.

The chosen location that accommodated the interview demands was a single dwelling residence with attached front verandah (see Appendix C).

Setting

The verandah was utilized as a welcoming environment upon the participants' arrival and departure. The dining room was adapted for the interview purpose to ensure:

1. Consistency from the first set of interviews to the second set of interviews.
2. A minimum of external influences and disruptions.

Data Collection

Qualitative researchers utilize the data collection strategies of direct observation, focused interviewing, document analysis, photographs, and supportive quantitative data (McLaughlin, 1994). In this study the methods employed for data collection included: 1) direct observation, 2) focused interviews, 3) document analysis, and 4) audios and videos.

Triangulation as described by Denzin (1978) is the process of cross-validation among researchers, research methods, and data sources. Cross-checking across different methods such as observation, interviews, and physical evidence contributes greatly to the study's validity. Triangulation was used in this study. A journal was also kept by the interviewer during the data collection process.

The semi-structured interview guide which was developed (Appendix A) was utilized as a prompt for the interview.

In keeping with the qualitative approach, the participant was encouraged to elaborate in her own words, at her own speed on her recollections.

The researcher used the individual's own descriptions, maintaining a minimum of bias through the interpretation process. Being a cohort of a similar age bracket to that of the participants, the researcher was able to relate to the recollections being recounted.

To safeguard the interpretation of the data the researcher kept a journal which outlined the researcher's feelings regarding the process.

Data Analysis

According to McLaughlin (1994), data analysis by qualitative researchers begins almost immediately, and proceeds along with data collection. Conversations or written observations are examined to generate a tentative coding system from which categories of phenomena are derived.

Prior to the beginning of the recorded interview process a pilot interview was conducted. This pilot interview was reviewed by an independent person to identify issues that might arise during the interviews and to assist in the identification of themes emerging in the interview. During the study all interviews were audio and videotaped and subsequently transcribed, with themes for each interview identified. This process was

continued until the themes were saturated. Upon reaching saturation the researcher conducted one additional interview to confirm saturation.

Comparisons were made between the initial interview and the second interview when the person was exposed to the positive aroma they had identified to determine if the positive stimulus affected the person's verbal or facial responses.

Ethical Considerations

Approval for this study was obtained from the Thesis Advisory Committee and the Human Ethics Review Committee of the Dalhousie University Faculty of Graduate Studies. Each participant, following a verbal explanation of the purpose and procedures of the study, was asked to sign a consent form (Appendix B). The form outlined areas such as: purpose of the study, expectations of participants, use of data, and confidentiality.

In the presentation of any of the information, confidentiality was insured through the use of fictitious names. The participants were free to withdraw from the study at any time.

Chapter 4

The Interviews

Introduction

The purpose of this study was to determine if the introduction of an aroma, identified from the senior women's memory as being pleasant, enhanced the leisure memory of senior women. Seven senior women aged 59-85 were interviewed.

The interviews were conducted during the months of August and September, 1996 at a private residence in a middle class area of Ottawa. The interview occurred in an informal setting, the dining room of the home, with both participant and interviewer sitting across from each other at the dining room table. A tape recorder was positioned on the table between them and a video camera was positioned on an adjacent buffet focusing on the participant. All interviews were scheduled for 10:00 am and lasted approximately 1 hour.

During the first interview, an approved interview guide was used for the purpose of encouraging the participant to recall and verbalize memories of pleasant aromas. A series of open-ended questions allowed the participant flexibility in selecting memories. The interview took on the form of a conversation in which the interview guide was loosely followed and not all questions were asked.

Preparation for the second interview included the identification of specific aromas mentioned in the first interview and a close reproduction of these aromas for their presentation during the second interview. The actual item producing the specific aroma (e.g.: freshly baked bread, spice) was introduced individually during the course of the second interview to assess the specific reaction to the specific aroma. An interview guide was not deemed necessary due to the intervention stimulus triggering response.

In addition to each interview being taped and videotaped, the interviewer kept a journal. At the end of the interview phase, all tapes were transcribed, and then erased.

This chapter presents the results of the two interviews with each of the seven women. Following a brief description of the participant, the results of Interview 1, Interview 2 and a discussion of themes are presented.

Ms. L.

Ms. L. is an alert, smiling senior (65) who seemed at ease with herself and the interview environment. She is married with an adult son and daughter, and at the time of the interview, was living in a private home with her husband, a retired army officer. While in the military, they enjoyed traveling extensively. During the interview, she gave consideration to each question before answering.

First Interview

The interview began with Ms. L. being asked to recall pleasant aromas from her childhood. After appearing to search her memory she recalled baked rice pudding, Christmas cake and raspberries. She vividly recalled a preschool setting: "It was my grandparent's home. An old log house. With a big wood stove...with her long dress and apron, she wore it every day of the week except Sunday ..."

As she described the memories associated with these aromas, she frequently smiled and her face glowed to the extent that the interviewer remarked upon it.

While recalling the 'feelings' associated with the smell of rice pudding, she appeared to think the feeling should be self-evident, and smiled when she said: "Oh, the love of my grandmother. The security of my grandfather".

When asked to describe the flavor of the rice pudding, she identified a "custardy" type smell and fresh ground nutmeg, then went on to describe the look of the rice pudding in detail:

... And all the brown on top, it would be the milk on top of the brown. I remember the pan she did the rice pudding in, I don't think she used it for anything else...it was blue.

She ended her description by laughingly stating: "Yeah I can sure smell it!"

She felt it important to note that the rice pudding was only and always served on Sundays. She related a story, while visiting her grandparents, her grandfather, who liked to tease, asked if she wanted rice pudding, her reaction: "of course, it was Sunday, so we said yes", indicated her desire for the security of routine. In fact, on one of the occasions her grandmother did not make rice pudding, the children picked up their plates and went next door to receive their "Sunday" rice pudding.

When asked to recall the Christmas cake, she described a three layer fruitcake with both words and hand motions. When she focused on describing the aroma of the cake: "Oh yeah, currants and raisins and cinnamon,...and cloves", a radiance appeared on her face, and again, this was remarked upon by the interviewer.

As part of her memories of the Christmas cake she recalled with a huge smile how she felt welcomed: "my grandparents wanted me there, so I would find ways to get there, to be there,..."

While focusing on the memories associated with raspberries, she smiled when recalling her grandmother making a refreshing drink by adding cold pump water to a syrup, called raspberry vinegar. When asked how it made her feel, she laughed and replied: "It was great, having a good cold drink in the summer. Refreshing."

When asked if her own mother made rice pudding, Ms. L. described in a monotone the ingredients her mother used in making a rice pudding that was boiled on the stove instead of being baked in the oven:

...the taste was O.K. ...but to me it just wasn't, because it didn't have the smell of it baking in the oven...I would think in fact back to my grandmother's home...and it was different, it just didn't seem to be the same thing.

She went on to comment that it was hard times (depression years) at home and when her mother cooked it was to stretch the food: "I remember my mother when she would boil chicken, and oh and that would break my heart, but it would go further that way."

Later in the interview she further expressed her feelings about boiling the chicken instead of baking it: "I would be disappointed...I just would be so disappointed."

The next aroma recalled was that of bread toasting over an open wood stove, both at the grandparents and at home. She laughingly described the process: "... put the fork through the bread and just hold it over. Hopefully it didn't burn, but that smelled good too!".

When asked to recall aromas she currently liked to cook, she mentioned sausage rolls, but then hesitated over describing the smell and finally with a laugh she said "warm". (She prepares the rolls using her grandmother's recipe and only at Christmas). When asked if making the sausage still made her feel warm her reply indicated the importance she associates with the memory of her grandmother: "AHD, ah. So now every Christmas, I only make them at Christmas time... that was the time my grandmother made them..."

She described making another fragrant dish, a tourtière, first by simply listing its spices, (allspice, garlic, onion, and others), but as the story unfolded her smile grew wider and she ended by laughingly adding: "I do the filling which is the aroma part...So my kitchen is really smelling by Christmas time for that reason." (Once again the interviewer remarks on Ms. L.'s facial appearance by saying "And your face lights up when you think about it").

While mentioning other fragrances from her time spent at her grandparent's, Ms. L. reminisced:

... fresh cut grass, when I smell it now, it reminds me of Grandfather and the horse.

... anytime I have the smell of freshly cut grass it reminds me of being there at the time the hay was cut up. The same kind of fragrance...it didn't smell the same but it reminds me of cutting the hay.

She also mentioned how, when she walked through the experimental farm recently, those country smells made her feel: "Very good. At ease, calm." Her manner at this time reflected this serenity.

Other smells she remembered, all of which she associated directly with her grandmother were: pumpkin pie made with molasses and spices; Yardley's Old English Lavender (her Grandmother used it); and roast beef. The sweet smell of oats triggered thoughts of her Grandfather and the farm.

She seemed surprised to realize: " ... how I smell something now and it reminds me of those days... more than 60 years ago. But they're all good memories, those are my good memories."

Towards the end of the interview she recalled on her own, another very vivid memory:

... the aromas that have just come into my mind is putting the clothes on the clothesline in the winter time and they freeze and my Grandmother would bring them in and anytime when I did have a clothesline of my own, I would put them out purposely just so I could have that smell of the frozen.

When asked to describe the smell, she replied with a very large smile and laugh: "Oh fresh, so fresh."

Second Interview

The second interview occurred 7 days following the first interview. Preparations included the presence of raspberry tea, molasses, nutmeg, freshly cut grass, fresh sage, dried savory, allspice, plus broiled toast and butter. All the items, except the tea and toast, were arranged on a covered tray on the buffet.

Ms. L. appeared relaxed, pleased that the first interview went well, and interested in proceeding with the second episode. She was offered steeped raspberry tea, to which she made no comment but sipped throughout the interview.

When given a small dish of molasses, she associated it with molasses her husband currently buys. When asked what she remembered when she tasted the molasses, she laughed and exclaimed, as if it were self-evident, "pumpkin pie!". She then went on to briefly discuss recipes and said: "I have made my own recipe and I add a little bit of molasses because any recipe I have in this modern age doesn't call for molasses."

Next a small dish of nutmeg was placed in front of Ms. L. Her recall and reaction were instantaneous, she repeatedly brought it to her nose to sniff it, smiled, and using both words and hand gestures she described her associated memory:

I can tell by looking at it, what it is...Oh, my goodness, I can see the stove, the wood stove... with the nice decoration over the top and the nice oven door...oh yes, there's the rice pudding.

When she sniffed it again, her face reflecting not just a smile but a huge grin, she remarked: "Oh that one is so good..."

On being asked how much fragrance made a difference in her life, she quickly replied: "A lot. I chose a summer cologne fragrance, I'm wearing it, (she smells her forearm)...called Linen....I said oh, that's just like the fresh clothes." Again she used hand gestures to describe bringing in the clothes.

She went on to speak about another Avon fragrance, one that smells like coconut. While talking about the fragrance, she associated it with a stop-over trip to Hawaii and seemed surprised that by sniffing the fragrance she'd be "back in Hawaii...on the way to Australia."

Next, a napkin covered basket of fresh grass was presented. She was interested but disappointed in it. She referred to her previous interview and wanted to clarify why it

wasn't what she wanted, while at the same time she kept sniffing it as if hoping it would invoke those memories: "Oh, that's very fresh grass... Its not quite what I talked about...the other stuff would be dry, like when its haying time. It's strange...it's just not the same".

A small bouquet of fresh green sage was next introduced. The sage did not stimulate any memories, in fact Ms. L. mistook it for mint and was surprised when she was told it was sage. She was unfamiliar with it fresh and only remembers it as being dried. (As the interviewer herself was unfamiliar with fresh sage and was dependent upon the local green grocer's expertise, a mistake could have occurred at the time of purchase).

Another small bowl, this one containing dried savory was placed in front of Ms. L. She immediately recognized the smell and associated it with having goose at her grandparents' at Christmas time, which led her on to enthusiastically recall horseradish:

I don't think my Grandmother grew herbs, they always bought them in the store except horse radish. And I love horseradish ...my grandfather grew horseradish and maybe that's why I like it so much and I can remember when I taste horseradish or smell horseradish I remember following my grandfather in the garden...and he said "taste this" and I tasted it and it was very hot. Then he would grind that and make his own horseradish for the winter.

She then compared how she made Yorkshire pudding to memories of how her grandmother made it: "...the pan was always very hot and smoking when she would put the batter in it."

The conversation flowed into how she enjoyed staying with the grandparents and she described going to the store to buy vanilla ice cream: "...it was always two vanilla ice cream and it would only be two, there wouldn't be three because my grandfather not liking vanilla."

A small dish containing allspice was placed in front of Ms. L. With a glowing face, she immediately associated it with her cooking: " ...it's reminding me of the plum pudding....and it reminds me now of my tourtières. This is great!"

At this point the interviewer left the room and returned a minute later with a plate and one piece of hot buttered toast (buttered prior to being broiled in the oven). Ms. L. took several sniffs, and seemed disappointed but smiled when she recognized the butter aroma and associated it with the past: "...it is butter, it isn't margarine... because back then it was butter, there was no such thing as margarine."

She continued to sniff the toast and finally connected it with the aroma of bread pudding: "the bread pudding that my grandmother used to make"... "it reminds me also of my mother"... "I remember more my mother doing the bread pudding...but it's good".

Molasses was offered to go with the toast, which prompted Ms. L. to recall family members liking molasses:

My husband today can find that little carton of Grandma's Molasses which is lighter and thinner and he'll sit there and that will be his meal with this type of bread and molasses...and then at home in my parents' place my father was into the molasses all the time...he loved the molasses....

...my grandmother she would use the molasses strictly for baking...at home at my parents' house it was more or less a dessert where you dipped the molasses...

When the topic of her mother was mentioned, Ms. L. could not think of any specific aromas that her mother liked, but did recall, using both words and hand gestures:

...she loved to go fishing ...and she loved to catch fish...

Oh yeah my mother would wait,...she had a tin picnic basket and she would have sandwiches and cucumber ...she'd make us tomato sandwiches before we would go sometime and they would be nice and mushy and I still enjoy nice and mushy tomato sandwich. I'd love to have it made ahead...that reminds me of when we'd get together as a family...whatever we caught, that would be our supper whenever we got home...my father enjoyed it but he liked to be out on the boat sort of thing, quieter, my mother it didn't matter she would fish off the shore,...my brother and I would get

tired of fishing and then we'd run and play in the water...So the smell of fish frying would remind those family times that we did have together, sometimes they were few and far between but they were there.

The interview ended with Ms. L. discussing her 95 year old mother's condition in a nursing home.

Discussion of Themes

There were two themes which occurred in both interviews: the love and security Ms. L. felt associated with the aromas she recalled; and the yearning to recapture the good feelings she had previously experienced, through the recreation of the associated aroma. An additional theme which emerged in the second interview was the expansion of her recollections to include positive memories of other members of her family.

Love and Security. During the first interview the pleasant aromas recalled were associated by the participant with perceived positive settings. The sense of love and security she associated with her grandparents was revealed both through facial expressions, (grins, smiles, a calmness) and verbally: "the love of my Grandmother, the security of my Grandfather"; "of course it was Sunday, so we said yes"; "my grandparents wanted me there"; "very good, at ease, calm".

In the second interview, the sense of love and security was associated with both grandparents and parents: "...following my grandfather in the garden...making his horseradish for the winter..."; "it was always two vanilla ice cream and it would only be two, there wouldn't be three because my grandfather not liking vanilla"; "So the smell of fish frying would remind those family times that we did have together."

Recreating the Aroma. In the first interview, Ms. L. related several incidences where she attempted to recreate the item associated with the aromatic memory: making rice pudding; creating pastry for sausage rolls; hanging out clothes for freshness; walking

through the experimental farm; and filling her own kitchen with spicy aromas at Christmas time.

She verbally acknowledged the extent she would go to in order to experience the aroma in the episode of hanging clothes: "I would put them out purposely just so I could have the smell of the frozen."

In the second interview, she demonstrated her desire to recreate remembered aromas through the purchase of the cologne "Linen"; the creation of a new pumpkin pie recipe to include molasses; the use of allspice in the tourtières which reminds her of the grandmother's plum pudding.

An additional theme which emerged in the second interview was the expansion of her recollections to include positive memories of other members of her family.

Expansion of Recollections. In the second interview, the participant recalled pleasant memories associated not only with her grandparents (as was the case in the first interview) but also other members of the family. Examples of these recollections are illustrated by the following quotes: "I remember more my mother doing the bread pudding, but its good."; "My father was into the molasses all the time...He loved the molasses."; "My husband today can find that little carton of Grandma's Molasses...and that would be his meal with this type of bread."; "She (her Mother) loved to go fishing and she loved to catch fish..."

During the second interview a remembered pleasant aroma appeared to stimulate the recall of more numerous pleasant memories associated with that particular aroma as well as the awakening of other pleasant memories not necessarily from the original setting.

Ms. M.

Ms. M. is a confident 59 year old senior woman. She and her husband are living in a middle class area of Ottawa. Their son and daughter resided within the same city.

First Interview

Although Ms. M. appeared to be slightly uncomfortable at first with the interview atmosphere, she relaxed as the interview progressed. At the beginning she tended to reply to the specific questions and waited to be prompted by the next question, rather than elaborate on her responses. A distraction occurred during the early part of the interview when a jack hammer was used in the yard next door, but this was dealt with by closing the window.

When asked to describe a pleasant aroma from childhood Ms. M. indicated in general terms the aromas associated with her mother or grandmother baking (bread and cookies) or food preparation.

She associated the aroma of cut grass to her teenage years when she was responsible for cutting her parents' lawn, and how she still liked the smell:

...I didn't associate it with work as much as, the cutting of the grass as liking...being out there and doing it, and the scents or aroma of the garden and things around me too, it was a pleasant aroma.

When we go out on a walk or something and walk past freshly cut grass, I still appreciate the aroma. Can't help but comment on it, if I've got somebody with me at the time...

...it was something we (husband and herself) could share as we would walk by a freshly cut field or grass or something...

She mentioned flowers and how the recollection of the gardens was more visual than aromatic. She then, however went on to state:

...but just the aroma coming from the flower beds was positive and I still, when we go out for a walk, I like to...some people have flowers that are more aromatic than others, and I try to plant things that make aromas...to enhance things...

...But I do like the tree blossoms when they're out and flowering plants or something in somebody's yard...and maybe that goes back to my youth too because my father had quite a few flowering shrubs and trees and the aromas were there in the spring.

She also recalled leaves and recounted: "...leaves on the ground, and crunching through leaves, there is an aroma to that and I like that."

Smells she associated with Christmas included pine, turkey, sage, brussel sprouts, and apple and mince meat pies:

Christmas and boughs, the tree, that was always a big thing in our house because my birthday was the 13th of December and my parents always had the tree in and up for my birthday, for my birthday party which was always before Christmas. The bringing in of the tree was a significant thing there...It would be a pine...

...and I still get a lot of pleasure from smelling the turkey when it cooks and all the company that go with it...that's a very positive aroma.

I guess the sage would be the main ingredient there (in the dressing) and I put lots of herbs in my dressing, but I think sage is probably the one...

...brussel sprouts have a fragrance that's different ...we always had brussel sprouts as part of the turkey dinner...

...we always had mince and apple pies...

She then goes on to clarify that although they had apple pie at Christmas, the aroma of apple pie was not only associated to the Christmas season: "...I mean who doesn't like the aroma of an apple pie cooking...but whether I associate it with Christmas or not,..."

She did not associate any particular pleasant aromas with other family birthdays although, in reference to the birthday of her brother and sister, she did state: "We always used to go on a sleigh ride..."

The conversation then turned towards aromas associated with the springtime, particularly hyacinths and spring flowers, and then the Easter ham:

I love spring flowers...I have them in my house as early as I can get them.

Well, the aromatic one is the hyacinth but visually the tulips and daffodils are pleasant but it's the aroma of the hyacinth bulb that is appealing to me...as far as having...I enjoy it in the house for the aroma.

I suppose I associate baking ham with Easter although often my mother made a turkey for that too. I like the aroma of baking ham but it's not maybe as...it doesn't trigger things quite the way maybe a turkey would, as far as thinking of pleasant times and pleasant occasions, it's not as specific to the home maybe...

When the topic of Thanksgiving was introduced Ms. M. recalled pumpkin pie and then recounted the event of carving the Halloween pumpkin:

...there are specific aromas as you carve a pumpkin and I guess I have memories of that as a child and then doing it with my children.

...It's more the occasion....yes, the company...

When asked about sweet peas, she mentioned a recent incident which reminded her of that aroma from her early teens:

I like that aroma and somebody brought in sweet peas to my husband's office the other day and I was sitting at the desk and it reminded me of my sweet peas in my father's garden and there is something quite specific to that.

On being questioned about the vividness of the memory she answered:

...when I sat down at that desk with the sweet peas in front of me I couldn't help but remember the garden, so it did prompt the memory at that point. I wouldn't have been thinking of this garden without it.

She went on to state that both the sight and smell prompted her recollection, caused her to deliberately sniff, remark upon them to her husband and receive a pleasant feeling from them:

...I'm sure it was both (visual and fragrance), there was a specific fragrance that I don't encounter every day.

...I picked them up and sniffed them.

...it was as pleasant as I remember.

...I did remark to my husband that I hadn't seen sweet peas in a long time and that it did remind me of my Dad's garden.

...it is a positive thing rather than a negative thing...this gives me a good feeling...I guess it's a good feeling of pleasure in remembering it.

When asked if she would deliberately sniff them if they were in a supermarket she clarified: "Probably I might even buy them...if they were fresh and colourful and especially if I was having people over for dinner...I would have bought them." This led her to recount buying gladiolus: "When I was at the market last week I bought some and I think one of the reasons I like them is I remember seeing them in the garden."

In recalling baking odours, she mentioned her mother's sticky buns and stated that she still made basically the same bun and still enjoyed them.

When asked about perfumes, she responded that she did not particularly like their odour.

She then went on to show her appreciation for the sense of smell in relating:

...I'd hate not to have a sense of smell...I don't think if you can't smell food you can enjoy it quite as much....I think you lose some of the pleasure in your life if you couldn't smell some things.

Ms. M. concluded the interview with the statement: "...I mean some things I'm observant of and some things I'm not...and I wasn't particularly aware of...aromas that had associations".

Second Interview

The second interview occurred eleven days following the first. Aromas identified in the first interview were prepared and included baked ham with cloves, fresh cut grass, fresh sage, apple tart, cold water, and a pine bough. These were placed on a covered tray except for the baked ham and pine bough.

Ms. M. appeared comfortable with the interview and confident in her replies. Although she elaborated on her responses to a certain degree she did not appear to be very emotionally involved in the memories generated.

The ham was on the table as the interview commenced. Ms. M. commented on it's appearance but it didn't appear to trigger any specific memories until she associated it with

big crowds of people: "...family dinners where there's ten or twelve around the table...and those are happy memories."

A small basket of cut grass was then placed in front of Ms. M. Although it reminded her that she needed to cut her grass, she clarified that the smell of the grass in the basket did not give her the same good feelings she got when she actually cut the grass: "...but to sit here and sniff it, I'm not sure it doesn't quite trigger them at all...in the same way."

When fresh sage and dried sage were placed before Ms. M. she identified the dried sage as having the same aroma as what she used and commented on its association: "I do associate it again with all the things that I did like cooking a turkey, and Christmas and family gatherings, and that sort of thing..."

Next, an apple tart was introduced which once savoured, resulted in her describing the activity:

Well I guess I remember carrying home bushel bags of apples and preparing them for pies...my son was really keen on apple pie and he would...I would cut them up and get them ready for the freezer and every fall we would do a bushel of apples...I guess that is one of the first things...the preparation and the aroma of cooking the pies...apple pie was a real staple in my family, it went with your roast beef Sunday dinner to finish up with apple pie...

I think I probably enjoyed both the fragrance of the cooking as well as the...the fragrance really comes out while it is being cooked...

A glass of cold water was tasted by the participant. Although it quenched her thirst it did not trigger any associated memories and merely caused Ms. M. to remark: "Drinking a glass of water doesn't trigger the same memories as sitting down on the beach."

She then compared this to the aroma of cut grass in the basket which did not trigger the memories she associated with cut grass outside.

You know there is definitely a fresh grass aroma there but it's not quite the same as you'd get from a full yard of freshly cut grass and...I think it's more that just seeing a basket with grass in it...even if it was just cut a half hour ago.

The last aroma was introduced by placing a pine bough on the table. Ms. M. reacted by stating: "That's a real pine aroma for sure. That certainly reminds me of the Christmas tree bough..."

She later identified the pine bough as being the most appealing of all the aromas introduced during the interview. She expanded: "I like Christmas and everything associated with it."

When prompted to discuss her birthday Ms. M. recounted how her parents always had the Christmas tree up for her party, and how she and her husband still acknowledged birthdays. She stated: "We acknowledge our birthdays...we make a point, I guess because my parents had made such a big deal of birthday parties..."

The conversation then focused on the fact that most of her comments regarding pleasant aromas were associated with annual occasions or celebrations.

When asked if it was the celebration that triggered the memory, she explained:

No I guess...The aroma triggers the memory and then the celebration is what comes to mind there and that's where it probably gets the more feelings...the pine bough is a memory of everything associated with it, it's not just the actual pine bough and the same for any of these other things.

...It's really a whole event, the whole season, it's not just...the smell of the tree...

She then proceeded to recite that often because of a hectic schedule, she would not take the time to consciously "smell the flowers" and therefore the aromas would not necessarily trigger pleasant memories.

The interview ended with Ms. M. acknowledging that despite her hectic schedule, she made a point of maintaining the special occasions. She stated:

Oh yes, I suppose it's a sense of tradition, family and things that are important...but you can get preoccupied with the event of the days at times and get overwhelmed by them...but special occasions were and I'm sure it has to do with happiness in childhood and what memories are there of that.

Discussion of Themes

Three themes were present in both interviews: aromas associated with related activities; family gatherings and tradition; and the appreciation of natural aromas.

It should be noted that the participant did not appear to become emotionally involved with the memories generated in either the first or the second interview.

Aromas Associated with Related Activities. The participant recalled most vividly those aromas which were associated with a related physical activity. In most instances the physical activity was a contributing factor in the imprinting of the aromatic memory. During the first interview this was demonstrated when the recall of the aroma of freshly cut grass was associated with being outdoors and cutting the grass, the leaf aroma with kicking the leaves, the apple aroma with carrying and preparing apples, and the pumpkin aroma with carving the pumpkin.

During the second interview this was demonstrated again in her descriptions of recalled memories stimulated by the introduction of the aroma. Apple aroma was associated with carrying home bushel bags of apples, and sage with cooking the turkey. When presented with freshly cut grass she revealed the importance the activity itself had on the perception of the aroma when she stated: "...but to sit here and sniff it, I'm not sure, it doesn't quite trigger them all...in the same way."

Family Traditions. Both interviews included the mention of family, family gatherings and traditions. During the first interview, the participant recalled the annual placing of the Christmas tree in time for her birthday, the Christmas and "all the company that go with it", the annual sleigh rides for her siblings' birthday, and carving the pumpkin (both as a youngster and then with her own children).

During the second interview her recollection of family gatherings were more plentiful and more vivid. She associated the aroma of the baked ham with big crowds of people or family dinners (of ten to twelve people), sage was associated with Christmas and

family gatherings, and pine was associated again both with Christmas and her birthday. She clarified during the second interview that "...the pine bough itself is a memory of everything associated with it,..."

During the second interview she attributed the importance of birthdays to the parties her parents arranged annually. Later in referring to birthdays and other special occasions she stated: "...it's a sense of tradition, family and things that are important..."

Appreciation of Natural Aromas. During both interviews all the aromas recalled as pleasant by the participant were natural (no synthetic products or perfumes). During the first interview she offered examples where her appreciation resulted in physical actions:

...Can't help but comment on it, if I've got somebody with me at the time..."(referring to freshly cut grass),...I try and plant things that make aromas..." (referring to aromatic flowers),...I enjoy it in the house for the aroma (referring to the Hyacinth), and ...I picked them up and sniffed them...(referring to sweet peas).

During the first interview she also expressed her appreciation of the sense of smell clearly when she stated..."you lose some of the pleasure in your life if you couldn't smell some things."

Ms. C.

Ms. C. is a smiling, confident seventy-five year old senior woman. She is a recent widow, living independently. She has five adult children residing in various locations.

First Interview

Ms. C. appeared very much at ease and pleased to participate in the interview.

Upon being asked to describe pleasant aromas from childhood, she immediately and with enthusiasm replied:

Well, in looking back I think one of the loveliest smells was coming home from school when my mother first made her fresh baked bread...to smell that gorgeous smell and the great big loaves...That along with molasses and sour cream was such a treat.

Molasses had a wonderful bouquet when it's on hot, homemade bread.

...molasses would always go on my bread first...
because it would soak in ...it didn't run off then.
And then the butter and then some sour cream.

She then vocalized on how the aroma made her feel:

The warmth was...the warmth and love in our family
...looking back now I realize that smell was associated
with love and warmth...we knew mother was baking bread
we'd rush home from school...

The discussion then focused on her recollection of all the local children being around when her mother was frying doughnuts, and her mother's generous attitude:
"...well the whole...all our friends knew...and they were all there...and she never minded."

Another odour she recalled was that of wild roses which led her to recount an incident involving her father:

My father was a very silent man...spoke very few words,
but when he spoke he meant what he said and we learned
that very early in life...one day I was walking back with him
and we came across a patch of wild roses and they were
beautiful pink roses and...I must have been 9 or 10 years old
and he went in the...this was on the side of the road...and he
picked me a rose...I've never gotten over that...that love.

It had such a beautiful cinnamon smell to it...that fragrance
stayed with me a long, long time.

Next the conversation was directed to the preparation of food for her own family.
She stated that she loved the smell of foods and then went on to clarify:

Well, I think...looking back now especially now that I'm
alone, I realized I cooked for love, I loved my family, I loved
my husband and it was...chocolate cake always made me feel good.

The recall of other kitchen aromas led her to voice how she associated those aromas with her childhood home and happy times:

...when I made pickles or relishes or jams or jellies, I loved
the bouquet that came from those things and it would always

take me back to my mother's kitchen.

Just the smell of the spices and the vinegar and the sugar...it always took me back to happy days when...

To my childhood...see now I could have told you that cause that was another bouquet in my mother's house...

I was always very happy when I was cooking...very seldom was I not happy...

When asked if it was the fragrance or the actual cooking of the food that made her happy she clarified:

I think it was a mixture cause I was always smelling the food as it cooked...you can tell how your food is by the smell...I always enjoyed the bouquet of foods being cooked or prepared...and I think the main reason of that was because it did take me back to my childhood.

The importance of the sense of smell in her cooking led her to discuss the hobby of wine making with her husband and his reliance on her sense of smell: "But it was the nose and that carried it right back and...your sense of smell goes right down...you almost taste it you know."

Later in the interview she elaborated:

...the bouquets in wine are absolutely incredible..very pleasant, pleasant feeling.

...It's not just one odour that you're smelling in wine... you might smell apples, green grass, some of the other smells... in red wine you can smell that...and plums, you can smell plums in wine...these smells are all pleasant and they make you want to taste it.

...the red wine has more bouquet, the red yes. Now you see...yeah, I loved red wine, I loved both wines, but if I'm just drinking the wine without food, I like white wine...but when you have a roast beef, you've got to have a good red wine...

When asked if she deliberately sniffed specific fragrances, to make herself feel the sense of warmth and love she had identified earlier in the interview she stated: "Yeah, I

smell flowers, roses especially, when I smell roses I feel happy, warm...some of the roses smell just gorgeous....I think pleasant odours have to make you feel happy..."

When asked if she thought that the odour makes a person like the event she replied no and described the example of carnations at a funeral home. She went on to clarify that although some people dislike the smell of carnations because of their association with funerals, she personally still liked the smell: "I love the smell of carnations and I do not associate them with death...I associate them with a nice feeling, not...I think that they're sent to make you feel good, not to make you feel sad."

In reporting on unpleasant odours, she described during her childhood walking past where the fishermen cleaned fish, and the smell of sauerkraut. In both examples, although the specific smell was unpleasant, it did not diminish the positive recollection:

...well that smelled to high heaven! We couldn't wait to get past that...you had to go past that smell to get to my sister's lovely, warm kitchen! So you almost looked forward to that bouquet or smell and knowing that when you got across it it was going to be wonderful.

And I remember in later years going down and the smell was gone and it wasn't the same.

Oh another smell, on the island they made sauerkraut, well I loved sauerkraut, but the ungodly odour that came from that when it was fermenting was terrible.

...but to me I loved that smell but it was putrid when I think back...you open up a bottle of sauerkraut and it stinks, but to me that was a wonderful warm smell, cause I loved sauerkraut.

When asked again to describe various positive aromas and how they affected her she reiterated: "I think most of my positive smells would be associated with love and warmth and caring."

Upon being asked if the smells she liked were associated with eating her response demonstrated her surprise in realizing this was not the case: "Oh I never thought of that, there are things that I love the smell of and I don't really like the taste of." Examples of this

were: "I loved the smell of chocolate cake being made and baked but I didn't eat a lot of that..." "I loved the smell of coffee percolating, but I don't always like the taste of it..."

When asked to recall fragrances of favorite spices she related:

Cinnamon and nutmeg, but there again that goes back to childhood because apple pies always had cinnamon and nutmeg in them ...

Oh I had some gorgeous herbs...it gives me great pleasure to go out and just rub my hand over rosemary, and smell, ah that's such a beautiful feeling to smell rosemary, it always makes me happy! Same way with basil, I just go and touch my basil and smell, that's lovely!

The interview then focused on fragrances and Ms.C. went on to recount that she would use Channel No. 5 cream to soothe a rash and remarked:

...course you smell it (the cream) and it smells so good and it's (the rash) gone - it takes the burn right out. Do you think it's the smell or do you think it's the cream? I don't think it's the cream at all, now that I think back.

Second Interview

A second interview was conducted but due to technical difficulties, this interview was not properly recorded and could not be transcribed. An additional interview was therefore required.

Third Interview

The third interview was conducted 22 days following the first interview. Preparations included the presence of tea, freshly baked bread, whipped cream, (referred to in the interview as sweet cream), molasses, brown sugar, carnation flowers, and some Hershey chocolate kisses. All the items, except the tea and carnations were on a covered tray on the table. The tea was served prior to the start of the interview and the carnation was in a vase on the buffet.

Ms. C. was very relaxed and comfortable with the interview. She seemed to thoroughly enjoy the conversation and the memories recalled using both hand and facial expression to indicate her pleasure. She often laughed during her recollections.

On being offered freshly made bread, the participant looked pleased and exclaimed: "Oh, that looks good! And it smells delicious, doesn't it...I think everybody must have enjoyed the smell of homemade bread."

When asked to explain what sweet cream actually was she related:

Well sweet cream was the fresh cream...But actually what we would have, we called it sour cream because it was in the container that mother put all her cream to sour...

But you see the clotted cream was the heavy, heavy cream that came to the very top and it was thick just like sour cream...it was thick, but sweet...We would think it was sour.

A small pitcher of molasses was uncovered in front of the participant, she immediately picked it up and took a long sniff and exclaimed with delight: "Oh my! That is...this is...I can almost say this is Tancook Island. Now I was born on Big Tancook Island."

This led her to recall:

But I would go down to my sister's and she lived on Little Tancook Island and this brings back a lot of memories this morning...and her husband...and I don't know why we were not offered this, but her husband always had bread and molasses for lunch, but we were never offered it, it was as though it was a special treat to him...and I use to long for it.

She then took another long sniff and then proceeded to pour it on the bread. She expressed her anticipation of adding the whipped (sweet) cream to the molasses and bread when she enthused: "Oh, oh that's going to be delicious."

Upon tasting the combination, her enjoyment was evident in her smile, laughter and words when she stated: "...that is so good..."

Later in the interview she expressed her desire to share the taste and aroma experience: "I think I'll give my children that thrill cause they've never had this (bread and molasses and clotted cream)..."

A bowl of brown sugar was also placed alongside the bread, cream and molasses already on the table. This caused Ms. C. to clarify:

Well, when I took molasses, we didn't use brown sugar...and it was really the molasses that I think I enjoyed the most...it would have had the most aroma to it...and that's what remind...when I think of it I think of bread and molasses and sour (sweet) cream.

She elaborated on memories from visiting in her sister's kitchen:

...When he (brother-in-law) would eat that (bread and molasses) my mouth would water for that, but I guess we were taught to behave ourselves, I guess I would never ask my sister for that unless she offered it to me.

...and she made such delicious bread...her loaves would be like that, big, enormous loaves of bread...

In discussing the sweet cream she explained how she associated it with her childhood home:

That's as close...that's closer than the sour cream...that is so good...you can get what I would call the clotted cream from Marks and Spencers...It comes out from (England)...I say Tancook Island I don't know why I thought Tancook Island but because it really relates me back to my mother's kitchen...when we would come in ...do you know that was about the only time we ever ate in the kitchen was when we'd come home from school...

This directed her to describe family meal time:

...our meals were quite formal. For that size family I cannot imagine how they kept them so formal...the adults talked at the table, children didn't...Nobody ate until mother sat down...and of course there were enough older girls...to wait on the table...Dad would serve and dad would serve the meat and mother would serve the vegetables...

She continued eating bread, with obvious enjoyment and remarked how the cream made all the difference. Next she explained her intention to experiment with the brown sugar to compare it with molasses in triggering her memories:

I think I'm going to try the brown sugar just to see if that comes back too because the brown sugar does not have the same bouquet. Yeah I could get quite plump if I had this in my diet everyday! It's funny how we deny ourselves things, isn't it? Cause I hardly ever think to have molasses and I just love it. Now when Robert comes, he always takes the molasses out and I enjoy that with him...last time he was home we went through a whole carton of it...

Continuing on with her comparison of brown sugar, she stated:

It is not as good as the molasses, but that childhood memory is there...you know I can remember when we did the brown sugar bit...

It's the aroma, everything, the molasses, as soon as it gets up to your nose you smell molasses and it's a continuation right down your throat...the brown sugar does not have the same effect but it is still good, and it still brings back when we were kids...

She recalled that although she had often had bread, butter and molasses since childhood, she had omitted the cream:

I've never thought of the cream because to me the cream had to be from mother's cream jar. Now isn't that funny? And you know that cream had it's own bouquet...neither one of these smell like that...

This led her to laughingly recall, in detail, a childhood chore of going with the neighbour's son to another farm to get the milk:

...Douggy and I would get the quart of milk and the cream would be up at the top like this and we'd just barely press in that paper cork and we took turns sucking all the cream out.

When a carnation was placed in front of the participant, she initially remarked: "I don't think flowers smell like they did years ago."

She immediately clarified this, reciting an incident where she had recently smelled a bouquet of roses: "...some almost smell putrid, but then there was the ones that I remember as a child smelling, as a child, and they were so fragrant."

Upon sniffing the carnation she stated how it didn't smell like a "true" carnation and elaborated:

...the carnation, boy you smell it and everything burst in your nose...and in your head when you smell...

...cinnamon and spicy...real spicy...well to smell a carnation would almost make your mouth water...you know a real carnation...the same way with smelling those roses... the real old-fashioned bouquet really did something to you...

Her disappointment in the smell of the carnation was evident in her repeated attempts to find a smell and when she stated: "No that doesn't do anything..."

Next, a small dish of chocolates was offered to Ms. C. to sniff. She takes a long sniff, burst out laughing and exclaimed:

Yeah, very happy memories...I'll have one thank you...boy there's nothing like chocolate is there?

Oh listen you get the smell of chocolate and...I had to have one right away...some kind of chemical reaction in the brain I'm sure...

The conversation continued on with Ms.C. reminiscing about her sister's roasted chicken:

...this would be such a thrill to be able to go back to Little Tancook and smell my sister's kitchen on a Sunday...she was a superb cook...and she roasted chicken like nobody else! It had to be the nicest smell and the nicest flavour and I...when I would roast a chicken I would think to myself, well what did my sister do to make that chicken so good?

She expressed her disappointment with the taste and smell of chicken from a supermarket and the size of the free range chicken. Toward the end of the discussion she indicated her intention to contact a caterer again to obtain a small free-range chicken.

The topic of sea smells was introduced which caused her to recall her childhood. Then she discussed the effect that recall of the sea aromas had on her childhood memories: "That brought me to my childhood...I don't think I want to go back as a child and come up again, but I love to have that..."

She went on to state how the aroma itself caused her to "flash" back to a specific incident:

Because remember when I was eating that the first time, see my mind was working on this aroma and I thought right away of my brother-in-law and having that molasses for his lunch... that brought back a flash, that was the flash...

Recognizing how this flashback caused her to react with a glow and smile, she reiterated her intention to share the experience with her children: "I'm going to...I am going to get some clotted cream and I'm going to have my children try this so that they know what it is I'm talking about..."

She concluded the interview with the statement: "You know what this has done for me...you'll never know what this has done for me...this has wiped away..."

Discussion of Themes

Three themes were common in both interviews: love and warmth, appreciation of aromas, both pleasant and unpleasant; and the intention to recreate the aromas.

Warmth and Love. During the first interview aromas recalled by Ms. C. were all associated with warmth and love, even those smells which she defined as unpleasant. Examples of pleasant aromas and their association could be found throughout the interview: In the case of molasses she specifically used the words "love and warmth"; in the case of the roses and her father, she stated: "I've never gotten over that...that love"; when referring to her own cooking she stated "I cooked for love".

In addition to the pleasant aromas, the unpleasant odours of rotting fish and sauerkraut were also identified with the pleasant memories of the "lovely, warm kitchen" and "a wonderful, warm smell".

Although in the third interview the participant did not directly associate her recollections with the specific words "love and warmth", the feelings were implied throughout the interview. Her frequent recall of pleasant memories associated with her

childhood family and Ms. C.'s desire to recreate these aromas indicated her remembrance of that warmth and love.

Appreciation of Aromas. During the first interview, Ms. C. indicated the importance she gave to the sense of smell in her cooking by stating: "...your sense of smell goes right down...you almost taste it you know." The importance she gave to how the aromas made her feel was shown when she explained "...it gives me great pleasure to go out and just rub my hand over rosemary, and smell, ah that's such a beautiful feeling to smell rosemary..."

During the first interview she acknowledged that liking the aroma of a certain food did not necessitate liking the taste. Examples of this were chocolate and coffee.

She also identified in the first interview that an odour did not necessarily have to be pleasant in itself to be imprinted as part of a positive experience. Examples of this was the smell of rotting fish encountered on the way to her sister's, and the smell of sauerkraut fermenting.

During the third interview, her appreciation of the sense of smell was again demonstrated when she described her reaction to carnations: "...the carnation, boy you smell it and everything burst in your nose...and in your head when you smell...". Her appreciation for the feelings generated by an aroma was confirmed with her description of the flowers: "Yeah, I smell flowers, roses especially, when I smell roses I feel happy, warm..."

Her appreciation of the aromas was also evident in the disappointment she expressed when the anticipated aroma was absent. In the first interview this disappointment was expressed with the words, "It wasn't the same" referring to going to the sister's house in the absence of the smell of fish. In the third interview, the disappointment occurred as a result of the carnations not having the recalled spicy aroma and was expressed as "No that doesn't do anything..." referring to the effect of the aroma.

Intention to Recreate the Aroma. During the first interview, she repeatedly mentioned kitchen aromas which she had created that reminded her of pleasant aromas from her childhood, she also stated that she had deliberately sniffed the roses because they made her feel happy, and rubbed her hand over rosemary for the feeling and aroma.

During the third interview she expressed her intention to deliberately take steps to recreate aromas which she currently yearned to experience again. She expressed her intention to buy and roast a small free range chicken in the hope it would produce the same aroma remembered from childhood. She also expressed the intention of specifically trying clotted cream because she thought it would be similar to the 'sour' cream she remembered from childhood and she wanted to share the experience with her children.

Ms. W.

Ms. W. is an alert, confident and articulate 85 year old widow. Although she is a diabetic she resides independently in her own home in a middle class residential area and has two sons living out of town.

First Interview

Ms. W. appeared very much at ease and interested. Throughout the interview she considered the question and then consciously expressed her answers using descriptive hand and body movements and facial expressions. During the interview she mentioned over twenty different aromas.

When asked about past pleasant aromas, she immediately recalled with enthusiasm, warm cocoa:

It was so comforting...

Well, it created a security feeling in me, it was...Mother was there, home was there and I was...my feet had been so cold, and the cocoa does seem to be spreading the comfort and pleasure all through me.

On being asked what the flavour was, she answered: "...a cocoa flavour and milk is in it of course and sugar...sweetness and pleasure."

She mentioned coming in with cold feet as a child, and being near the stove:

And then as they commenced to wake up and get feeling again,
I had chilled legs...no that is not a pleasant...

It was this big oven, a big oven door on it and that...it was just
the warm air was coming out at me right away, warmth, and pleasure...
and security.

When asked if this was only a childhood memory she replied: "In the teenage years, well yes in the winter time in the country your feet always get cold!"

Other fragrances she remembered included vanilla, nutmeg, and mint, and cedar shingles:

Well, vanilla,...it's just my favourite flavouring.

Mother always put vanilla flavouring in the donuts and another thing that she would put in was nutmeg...and to this day I just love nutmeg. And in fact my dessert that I have for my evening meal is that little plastic tub of apple sauce and I shake, I've got a nutmeg shaker there, and I put some nutmeg on my apple sauce and...that'll be my dessert night after night, after night.

Mint! Now around our front door, where the door step came up to the edge of the house, there was a little bit of earth there and mint grew there... where I am living now, the old gentleman who used to live on the other side of the fence he had mint and he gave me some. So for years I have mint growing out there.

My father shingled...the roof of our house and the cedar shingles, they had the nicest odour.

Her recollection of the aroma of cedar shingles resulted in a detailed description of her climbing the roof and sliding down the shingles.

Another aromatic recollection which triggered detailed memories of being around horses and the horse barn was that of a leather harness. She recalled: "There's an odour that comes from harness...and I loved the smell...But when I would first go in to the barn, I would go into that place where all the harness was hung up on pegs, wooden pegs."

When recalling scents associated with school she identified, the flowers and tree boughs brought in by students, chalk, and the smell of heat of the wood burning stove.

Recalling the chalk smell Ms W. recounted: "The chalk smell and we all had to take turns cleaning the board and then taking the little erasers out and spanking them together...I was happy at school so when I would get in, that was just a nice, comforting smell."

When asked if she recalled other smells typical of the school, she first said no, then immediately corrected herself and laughed with delight upon recalling: "Oh a stove, of course...I can smell it now. I'll go home and dream all this! Well the smell of wood burning cause it was a wood stove...there's a smell to heat isn't there?..."

Aromas associated with romance were also recalled. Her recollection of cedar shingles led her to remember her cedar chest, and remembering aromas of her teenage years prompted her to recall the balm of Gilead:

Then after I became engaged, my husband gave me a cedar chest. Beautiful smell again.

...it (balm of Gilead) is an odour that I associate with romance, because when I first discovered it I was out walking with Walter.... A lovely feeling yes. Oh it just turns my heart right over when I come upon it now.

When asked why she associated the feelings she had described to the various aromas she had remembered, she explained her on going desire for security, first at home as a child, then as a young working girl, then as a married woman:

It was security I was after...coming home from school and mother had finished a batch of donuts maybe...Oh everything was all right, I was safe. I've got a home, I've got a mother and I've got my father...it was great satisfaction when I did get my job... well, I'm a housewife and that's how I went on for years and years, I was a housewife.

Next the conversation focused on kitchen aromas. Ms. W. recalled the custom of having baked beans on Saturday night, both as a child and as a mother with her own family: "Saturday night, that was the night. I'd never have baked beans on any other

night...they wouldn't smell the same." Referring to the aroma of molasses in the beans, she explained: "It would continue in the steam inside your house."

She then recalled the smell of roast pork and vegetables and recounted how she would prepare the roast pork in a roaster for a picnic lunch. She recalled: "...you got the aroma of the vegetables added into it...oh it was good and did those boys ever eat!"

Other aromas she recalled included that of bacon. She recalled her mother frying back bacon and when asked if she still liked the smell of bacon, she replied: "Do I ... Yes I do, I do it in the microwave now..." This led her to recount: "Bacon and pancakes and maple syrup - an ideal breakfast"

When discussing coffee she remarked: "The taste...the smell, I wonder if the odour was taken away from coffee would we be as anxious for it as we are?"

The next aroma she discussed was that of the spruce Christmas tree. This triggered detailed memories of the candles on the tree and helping her father get the tree:

... when mother lit those little candles, we were all right there
in the room and we stayed there until it was time to put them out,
pinch them out...but the odour from the tree.
... I went with him...we pulled it back home...

Second Interview

The second interview was held seven days following the first. Preparations for the second interview included the presence of mint tea, hot cocoa, and bacon.

Ms. W. again appeared very much at ease with the interview process and continued to be very descriptive in her answers.

On being served mint tea from a tea pot, Ms.W. recalled memories associated with mint:

Well going out and sitting on the front step of my parental
home with my mother. So of course just happy, content...the
mint was there, right at our feet...I'd reach down and pinch a leaf...

...my mother would use it in jelly...

And do you know the jelly I'm after every Christmas and I just have to have it with my turkey or it isn't Christmas, and that's mint...and cranberries too, but mint oh my...!

Well it makes your plate look so much nicer if you have your cranberry and a bit of mint jelly beside it.

When a mug of hot cocoa was placed in front of her, Ms. W. sniffed and exclaimed: "Oh...I want to put my feet in the oven! Oh that is beautiful!" She described how it made her feel, and the associated memory: "Oh something else besides just comfort." "I just feel warm and nice inside."

When asked if she would make some cocoa for herself to get the warm, nice feeling, Ms. W. replied: "Why couldn't I, just make cocoa but put a bit of sugar twin?" (because of her diabetes)

Later in the interview she remarked:

I guess I'll have to have another sip of this. It's lovely. Lovely. It's just so good. I'm going to try that now. Cause sometimes when I'm going to bed at night, I've had my three meals and I know that I shouldn't have anything else, but sometimes when I'm going to bed I am hungry, just a cup of cocoa, oh! Thank you, that's another little leaf turned over in my life all of a sudden that I think I can do that and not wake up tomorrow morning with a high count of sugar. I'm certainly going to try it.

A pan of freshly fried back bacon was placed in front of the participant. Upon tasting it, Ms.W. exclaimed how delicious it was and then recalled how her sister-in-law also liked the "nice" smell of bacon. Ms. W. then went on to describe how she wrapped the bacon so she could easily microwave it during the week.

Her reply to how the bacon made her feel was: "Oh good I'm just enjoying this so much!"

The topic of balm of Gilead was introduced and Ms. W. mentioned her intention to call the experimental farm with regards to it. This led to a discussion of other plants that were present at her home and she described the peonies and the Saringga from childhood:

Mother had a great big...I want to call it a bush of peonies.... now another bush we had at home was the Saringga, that is the mock orange and it's very sweet smelling. Mother had a Saringga bush, I have a Saringga bush too, but Dad liked bushes all shaped flat on the top and straight down the sides...

She mentioned that stores use the smell of baking bread as an effective marketing gimmick, and how the odour does make you buy them.

She then recounted a recent incident where she got the smell of skunk and immediately knew she should go in because as she explained, she associated the smell with danger and caution: "From way back has well kind of meant danger and danger to my pets...The caution that I was given years and years ago as a little girl..."

This led Ms. W. to connect the effect odours can have on behavior to elderly hospitalized patients, and she remarked:

...do you suppose that if there was very nice perfume or odour sprayed into their room...that it might help them through that disturbed session that they were going through

...do you suppose that a pleasant odour from their past being sprayed into their room?...would have or help them?

Next the conversation flowed into the difficulty which exists in identifying things or aromas the patient would like if there are no relatives or close friends to inform staff.

Ms. W. recalled that she was only seven when she enjoyed the cocoa. In response to a statement that memory is there forever, she remarked: "Yes, yes, once that becomes...well registered."

She recalled using the soap Dove with her husband when he was hospitalized. At that time a nurse remarked that Dove smelled like Pond's cream and so Ms. W. associated Dove with Pond's Cream, whenever she used it. The delicate smell of Dove led her on to relate an incident involving her son and his sensitivity to odours due to asthma, and another incident relating to her hairdresser's allergy to odours.

The interview ended with Ms. W. stating: "...but now I want to get to see that balm of Gilead tree..."

Discussion of Themes

Although the main theme present in the first interview was that of the need for the feeling of security, it was only alluded to in the second interview. This feeling of security was continually associated with warmth, comfort and pleasure.

Two additional themes which emerged during the second interview were: a statement of intent to recreate the feelings by re-introducing the aromatic stimulus; and the recognition of the possible impact of introducing a recalled pleasant aroma.

Security and Warmth. During the first interview, several times Ms.W. identified her need for a feeling of security in a very direct manner: "Well, it created a security feeling in me...It was security I was after". During the interview, she often combined the words: warmth, security, comfort, and pleasure, to describe her feelings associated with her aromatic memories. While a child, she equated both the smell of cocoa and donuts with the security of home and family and as a young woman, she was "satisfied" after she became employed. Her feeling of security as an adult woman was evident when she stated she was a housewife "for years and years."

As an adult she reinforced this sense of security by continuing to surround herself and her family with aromas from her childhood: she continued to use nutmeg "night after night after night", grow mint, cook bacon and maintained the custom of baking beans on "Saturday night, that was the night".

During the second interview, her desire for a feeling of security was evident in a much more subtle manner. She again associated cocoa with the warmth, security and comfort of her childhood home, and the smell of mint with her mother at home. The importance of continuity was revealed when she stated "I just have to have it (mint) with my turkey or it isn't Christmas".

Statement of Intent. In the first interview, although she did not state a deliberate intent to recreate an aroma, she does remark upon recalling aromas associated with the school, particularly the stove and the smell of wood burning, and laughingly exclaimed "I'll go home and dream all this!"

During the second interview after the cocoa was savoured, Ms. W. exclaimed: "Oh ...I want to put my feet in the oven!" referring to her childhood memories of the big oven and the associated warmth, pleasure and security. She identified that the cocoa made her feel "something else beside just comfort...I just feel warm and nice inside". Recognizing how good it made her feel, and how she wanted the feeling again on a nightly basis, but acknowledging the need for caution due to her diabetic diet, she then stated her intention to "I'm going to try that now...I'm certainly going to try it".

During this interview she also expressed her intention to call the experimental farm to inquire about balm of Gilead tree, and later she stated "...but now I want to get to see that balm of Gilead tree..."

Recognition of the Possible Impact of Introducing a Recalled Pleasant Aroma.

During the second interview Ms. W. recognized the impact that recalled aromas had on her mood and behavior. She then expanded this topic to discuss the possible benefit the use of recalled pleasant aromas would have on hospitalized, disturbed, elderly patients, in posing the question: "...do you suppose that a pleasant odour from their past being sprayed in to their room?...would have or help them?"

Ms. B

Ms. B. is an alert, active senior woman of eighty years of age, who lives independently in her own home in a middle class neighbourhood of Ottawa. Born in Canada of British parents, she moved with her divorced mother and sister from Montreal to England when she was sixteen and returned to Canada in her early twenties. She had been married and during the interviews mentioned two adult daughters and a son and a daughter-

in-law. She has recently received her Bachelor of Arts and intends to continue attending university classes.

First Interview

Ms. B. appeared relaxed during the interview, but not particularly interested in the proceedings.

In response to the question on what fragrances she recalled from childhood, Ms. B. remarked: "The only one I remember very vividly is when my mother made bread, the smell of baking bread. We always had dogs, great big, hairy dogs, and I remember the smell of a big dog, you know...doggy smell."

In response to how the bread made her feel, she replied: "It made me feel like this was home..."

Later in the interview when she was encouraged to recall other smells of her childhood she clarified the doggy smell in saying:

We always use to have a dog, either an Irish Terrier or an Airedale so they were hairy dogs, so they were a bit...doggy smell. It's hard to bath a great big Airedale so I guess they wouldn't get that very often.

Her response to whether she liked the smell was: "It was just there."

Some of the other memories she recalled from her childhood years in the Montreal area included aromas associated with flowers, various cooking aromas, and fireworks, fireplaces and stoves.

With regards to flowers she recalled:

...we had a cottage with quite a big garden and my mother used to grow lots and lots of sweet peas and I remember their aroma was....lilies of the valley, strong smelling flowers like that , those two particularly.

Lots and lots of flowers...I remember the lilies, they smell...

Sweet peas because my mother used to like to grow them, she used to have a trellis you know...

There's roses down in Montreal, a couple of weeks ago we went to the Botanical Gardens and the roses smelled beautiful.

That's another smell that I remember from childhood, of course, I guess everybody does, that's lilacs ...Lilacs in the garden...

Her recollections of kitchen aromas included:

My mother used to make her own Christmas pudding so it smelled of I guess the brandy she put in them...raisins and currants and so forth. And mincemeat has a sort of smell, the same sort of...she used to make her own.

Oh yes, nice sweet bread, crusty bread you know. My mother's mincemeat and things like that...I could taste the flavours of that...chocolate cake...

This led her to recall:

I just enjoyed the "chocolatey" taste and we lived near a corner where there was a Laura Secord chocolates...I can remember being allowed to buy chocolates occasionally, but I enjoyed the flavour particularly the ones with ginger in them. Chocolate covered ginger...

She described the smell associated with the fireplaces:

We had a fireplace when I was young and we used to burn wood and coal and that and I remember the smell of the fires, sitting around the fire in the winter, and in the summer at the cottage, sitting around an open fire, open fireplace...It was wood we burned out at the cottage but I had an idea that at home we burned coal...It (the smell of burning wood) was a happy sort of smell.

She also recalled the smell of fireworks: "The 24th of May because that was my birthday and I remember all the fireworks and they had a certain smell about all the fireworks and rockets going up."

She spoke about living in England with her sister and mother, after her parents divorced, and recalled from her time there:

I recall all the cooking was done on the kitchen fire...it doesn't bring back memory of any aromas.

The circumstances we were in England, couldn't afford expensive perfume. And I guess when I was a teenager growing up, I had a little...there's a scent that I still use today,

that...'4711'...I still use it today...I don't like anything too strong and it's not heavy, it's not strong...

(The interviewer remarked that the participant's face lit up when she discussed the cologne).

When discussing the aromas she currently liked when she cooked, she recalled:

...it's quite a nice smell, a stew on the stove or something like that...

...It's an easy thing to do when you're living alone, just to put everything in a crock pot and go away and you come back and as soon as you open the door you get the smell through the house and it's quite pleasing...I don't think it triggers any memories...but supper's cooking.

I like lamb with mint sauce and that has a certain minty smell...

This leads her on to recall with her face lighting up: "Well my mother used to make it with vinegar and real mint, you know. Now you buy mint jelly and that in a jar, but she used to make her own, it did smell sort of minty."

Second Interview

The second interview occurred seven days following the first. Preparations included the presence of freshly baked bread, ginger marmalade, pine bough, cinnamon tea, chocolate coated ginger, red pepper and cloves. All the items except the bread and cinnamon tea were arranged on a covered tray on the buffet.

Ms. B. appeared relaxed and interested in continuing with the second interview. During the interview she remarked that on that day she was not smelling very well. As the interview progressed, the participant's interest and enthusiasm increased.

A loaf of freshly baked crusty bread was presented. As it was sliced she reacted by exclaiming: "Marvelous!"(the presence of the bread)... "Oh gorgeous!" (referring to how it tasted).

Upon being informed that the dough had been bought frozen at the grocery store and then baked at home, Ms. B. remarked: "It's certainly delicious, I had no idea that you could buy it like that, I must try it..."

When she was presented with ginger marmalade to be used with the bread, no associated memories were expressed.

Next, the discussion focused on the cottage setting:

Evergreen trees you know, pine, that sort of thing. Actually on our property the cottage had hickory trees and I don't think there's any scent to those but you know walking through the woods you'd get the scent of the pine.

The uncovering of a small pine bough caused her to exclaim: "...Is that fresh pine? Yes, yes lovely, that's a lovely smell...Not only the cottage, I think it also reminds me of Christmas when I was a child."

Then she tried the cinnamon tea and remarked: "Beautiful, lovely, I must get some."

The presentation of a small bouquet of fresh green leaves, caused Ms. B. to bend over, sniff and exclaim "Mint!" and triggered the recollection of her mother preparing mint:

I have some mint in my garden, I used to...my mother used to make lemon scents with the mint leaves and vinegar, you know not the mint jelly, just chop the mint leaves up in vinegar. I guess that's an English way of doing it ...I used to make...That's nice on lamb chops or roast lamb, but now I'm more likely to buy mint jelly...getting lazy you know, just cooking for myself...but I have seen little jars of mint chopped up in vinegar in some of the grocery stores...

When the chocolate was presented, although she stated that she could smell the chocolate, she wasn't enthused until she tasted it and confirmed that it was chocolate covered ginger, then she exclaimed:

Sure enough it's got the ginger in! Lovely!....Oh yes...they used to be my favorite chocolates when I was a child...I don't eat chocolates very often any more but that's what I'd choose if I bought some I think...

When presented with two small dishes, one of red pepper and one of cloves, no memories were evoked except a vague reference to using red pepper in chili, and cloves in Christmas pudding.

Recognizing that there were no more aromatic items to be presented Ms. B. remarked: "It's lovely, thank you very much. But all those things that you got, the bread, the chocolates, they do take me back..."

When verbally prompted to discuss flowers, Ms. B. recalled a recent trip to the Botanical Gardens and specifically the roses:

And the smell of the roses were just beautiful, and there were other flowers too, a lot of flowers but the roses particularly, beautiful rose gardens down there...but the smell of the roses I remember more than anything else. Probably some of the others had a nice scent but the roses are the ones that come to mind.

This led her to recall:

I lived in England when I was in my late teens and I think there were a lot of roses over there in my aunt's garden and my grandparents' garden that I remember...I don't think either of them (mother or father) planted roses when I was a child...but as I say in England you see lots and lots of roses there.

My aunt had a garden over there and my grandparents had a garden over there, but their's was more a vegetable garden, but it had some...

Almost every year for about ten years I planted a rose and it would get winter kill so I haven't bothered the last year or two.

...This wasn't a first visit to the Botanical Gardens, it took me back to other years and I don't know if you've ever been out to Vancouver, they have beautiful gardens and roses out there and it reminded me of that too.

This led to a discussion of other trips Ms. B. had taken over the years. During her recollections she mentions the oranges of Greece:

...the place was full of oranges... you get the "orangey" smell when they're ripe like that right off the tree they taste so much better than buying them in the store

I used to be a great orange peeler, I haven't done it for a while...

...those great big fat lovely oranges that I remember - they tasted so good...

Discussion of Themes

There were two themes which emerged in both the first and second interviews: The warmth and constancy of home; and the desire by Ms. B. for specific aromas which caused her to reproduce them.

During the second interview, the following two items were noted: Ms. B. provided more detailed descriptions of settings and events (this could be due to the participant's increased level of interest or the intervention of the aromas); the participant only reacted positively and recalled memories to those aromas which were very similar to those present in the participant's memory. (An example of this was the introduction of the chocolate which did not appear to trigger a recall until Ms. B. tasted and identified the ginger).

Warmth and Constancy. During the first interview aromas recalled by Ms. B. were associated with perceived positive settings. The sense of warmth and constancy was revealed through various expressions: "It made me feel like this is home" when she referred to baking bread; and "It was a happy sort of smell" referring to wood burning. The aroma of simmering stew in the crockpot when she arrived home was described as "it's quite pleasing...I don't think it triggers any memories...but supper's cooking."

During the second interview, Ms. B. described various settings in terms of warmth and constancy: in the cottage setting "...walking through the woods you'd get the scent of pine...it also reminds me of Christmas when I was a child"; As a teenager in England, she recalled the abundance of roses: "...a lot of roses over there in my aunt's garden and my grandparent's garden...in England you see lots and lots of roses there."

Reproducing the Aroma. In the first interview, Ms. B. indicated that some of the aromas she currently liked, she could remember liking as a child: flowers, mint, chocolate

covered ginger, and the cologne '4711'. She also revealed that over the years she attempted to maintain these aromas in her environment by visiting the Botanical Gardens, cooking with mint, buying the chocolates and using the cologne.

During the second interview, upon presentation of aromas which she liked but currently didn't have, she expressed the intention of obtaining them (frozen bread dough to be baked, and cinnamon tea). She also revealed her love of the aroma of roses through her efforts to grow them, and her trips to various Botanical Gardens.

Ms. A.

Ms. A. is a smiling, relaxed, senior woman of 75 years of age. She resides with her husband in a private residence in the Ottawa. They have two daughters and a son, and she is frequently involved in activities with family and friends.

First Interview

Ms. A. appeared relaxed, and enthused about the interview.

In response to a question regarding pleasant aromas remembered from childhood, her recollections were numerous and centered mostly around strawberries and foods of autumn.

...in the fall. Chili sauce and pickles being made -
that was everybody's favourite aroma, chili sauce.
Roast beef on Sundays filling the house...

...walking along the leaves weren't always raked off there
was a sweet smell about it and as you went by different
houses you could smell it (chili)...and it went along with
walking and kicking the leaves... and maybe baking apples, a
nice crunchy Mac apple...

In response to what she felt at the time she was smelling the chili she replied:

"...going home and having it with some bread...Cozy, warm, happy, special..."

When asked if she prepared the chili herself, she explained: "Yes, a long time ago when the children were small it was something one did in the fall to make pickles...and I made the chili sauce yes always." She clarified that it was not her mother's recipe: "...but

I used it more or less...it had the same smell." When recalling other memories of apples she recounted:

You know you'd see lots of people going along eating an apple after school.

Well it smelled absolutely delicious certainly...I think it was just the whole idea, it went...with fall and the smell of leaves and pickles and ...

Making apple pies in the fall, that's a nice aroma to walk into.

She also discussed oranges in the winter: "...I connect the big oranges with Christmas...you know those great big ones...we would have them in our stockings...the look and the smell when we were peeling them..."

She recalled from the early years of raising a family: "...you know when you're bathing the baby, Johnson's powder would always smell so nice...a baby has its own nice smell about it...and the children, baking my Christmas cakes, with dates and currants..."

When asked what aromas attracted her at the supermarket she only briefly mentioned fruit but the topic of bread led her to remember:

Well, Mother used to bake...she would bake a lot of bread and buns and that's a nice fragrance...I could put that in the category of warm feelings.

Yeah there are some fragrances, warm and cozy feelings..it sounds funny but there are.

Additional pleasant fragrances she recalled included freshly cut lilacs and freshly mowed grass.

The conversation then flowed into her recall of Yardley's Old English Lavender. She mentioned that the aroma of it brought back memories of her mother and sister, who both liked it. She would not buy it for herself but explained: "It's a favorite because of the memories...it has nothing to do with me...it does with them."

The topic changed and she attempted to explain how things seemed more vivid in her memory:

MacIntosh apples aren't like they used to be certainly, or I guess it's because things as we get old..things aren't like in our youth...things become larger and sweeter and more sparkly...I don't know, the way we think of them...we don't have to exaggerate, maybe we're not exaggerating, maybe if we were to go back at that age it would be just exactly the same...

She also explained how she enjoyed sharing the experience:

...if you're enjoying something, the thing is you wish someone was there, maybe...well, just to share things, because things that are shared always taste better.

...I think a fragrance is very nice, it's special and it can make you have your own special feelings...and you just wish somebody was there that you could tell and ask them to smell it too...

She related how disappointed she was when something didn't taste like she anticipated: "...strawberry anything is the least delicious as far as I'm concerned, I'm not even very fond of strawberry ice cream because it doesn't taste like strawberry."

At this point the tape recording the interview was full.

Second Interview

The second interview occurred 10 days following the first. Preparation included the presence of strawberry shortcake.

Ms. A. appeared pleased to be there and looking forward to the interview with enthusiasm.

At the beginning of the interview a bowl of strawberry shortcake (biscuit, strawberries and whipped cream) was placed before the participant. Her reaction was one of surprise and delight, she appeared to enjoy the look and smell, and her appreciation of the taste was apparent in her response: "It's delicious. Strawberry shortcake must have been the most delectable feasts in the world!"

Upon sniffing, she remarked:

I just enjoy it...Nectar of the Gods! I think

...because I like them so much it might not come across that way to other people, but you just sort of...well, I like to smell them first and enjoy...pop them in your mouth...

When asked what memories she recalled she recounted:

It's hard to say other than just enjoying strawberries or the boys gone out, the girls gone out picking strawberries and brought them in you know, on one of the strawberry farms, and I don't know, just nice...or making strawberry jam, which is nice, you think how much you're going to enjoy that...

...when Janet was born...and I was coming out of the anesthetic or coming to, whatever..I was saying I would love a big piece of strawberry shortcake...they tease me about that, the first thing I thought of was strawberry shortcake.

...we had a strawberry patch around the house and I'm sure I wouldn't have picked them because I wasn't very good at helping...to be perfectly honest about it. I just enjoyed them...eating them...and you know Mother always made strawberry jam and strawberry shortcake...and I think it's something you look forward to all during the winter...you think in the summer it will be strawberry and instantly you think not of strawberry season but the strawberry shortcake.

This led her to recall times when other people had made the strawberry shortcake to please her:

And one time, oh years ago, it was my birthday and Janet had made cream puffs but with strawberries in them and on top, and she had said go in the sun room and she had a table there...then about months ago we were over at ...for dinner and they had strawberry shortcake, a special treat for me...my family all know that that is a special treat..and I think things if they're kept...they are special.

Well I was very delighted back then and a couple months ago the girls made strawberry shortcake because...I knew it was made because I especially like strawberries...so that pleased me greatly...pleasant, pleasantness, and joy...and joy because people made them for me.

When asked how she felt when she made strawberry shortcake, Ms. A. replied:

I'm excited and I'm happy and I'm pleased...you know how much fun it is to do something for somebody that you know that they are going to enjoy...once in a rare blue moon you find a gift that you know somebody is going to like.

. . . and almost childlike. . . look I made this for you!
Especially! Isn't that wonderful!

This supported a comment made early in the interview by Ms. A.: "I always get a lot of pleasure preparing it because I knew the family were going to just love it as much as I did..."

The conversation flowed on with Ms. A. recalling other pleasant aromas, including fragrances associated with walking through the exhibition, wiener roasts and then in more detail the smell of burning leaves in the fall. She recalled that recently she had caught a whiff of something that smelled of burning leaves and had inquired of her son: "Can you smell that, that nice...you know, the smell of burning leaves in the fall..."

When asked how it made her feel, she replied: "Made me feel good, and I drew it to Bruce's attention to see if he, if he could smell it too."

The topic of the loss of the sense of smell, and the effect this would have on the memory of scents was introduced. Ms. A. remarked:

That must be a dreadful affliction...and there are people
who don't bother to smell things...

If I couldn't smell it...I wouldn't be aware that it was there
and therefore it would not trigger a memory...I wouldn't have
thought back...

The conversation then turned again towards the tasting of the strawberry shortcake.

Discussion of Themes

There were three themes present in both interviews: warmth and security; an appreciation of pleasant aromas; and the sharing of the experience with others.

Warmth and Security. During the first interview this theme was present in her descriptions of the feelings she associated with recalled pleasant aromas. When she related the feelings she associated with chili it was in terms of "cozy, warm, happy, special" and "Going home and having it with some bread". She described the smell of apple pies in the

fall as a "nice aroma to walk into", and specifically associated the "fragrance" of baking bread as "warm feelings". Her sense of security through continuity was revealed in her recollection that chili and pickles were made every fall, roast beef dinners every Sunday, and strawberry shortcake every summer.

In the second interview this sense of security was reiterated when Ms. A. recalled that her mother always made strawberry shortcake, and Ms. A. did the same, year after year for her own family. Many of the memories recalled were directly related to seasonal activities year after year.

Appreciation of Pleasant Aromas. During both the first and second interviews, Ms. A.'s ability to vividly describe her many aromatic memories, their associated feelings and settings, illustrated the importance aroma had in her life.

During the second interview she verbally acknowledged this importance, with her replies, when asked about sniffing various aromas "I just enjoy it..." and "I like to smell them first and enjoy..." She considered that the loss of the sense of smell would be "a dreadful affliction" and could not comprehend that "there are people who don't bother to smell things."

Sharing the Experience with Others. During the first interview Ms. A. recalled Lavender as a pleasant aroma, although she personally did not like it, it remained a pleasant memory because it was a favourite of her mother and sister, and so she often gave it to them and associated it with them.

Several times during both interviews Ms. A. acknowledged her desire to share not only her aromatic experiences but also the experiences of the other senses. During the first interview this was clearly stated with "...if you're enjoying something, the thing is you wish someone was there, maybe...well, just to share things, because things that are shared always taste better" and re-emphasized with "..and you just wish someone was there that you could tell and ask them to smell it too."

In the second interview, with the presence of the actual strawberry shortcake, she recalled how much she enjoyed preparing the shortcake, anticipating sharing it with her family, and her family's enjoyment of it.

She also recalled how wonderful she felt on the occasions when her family had prepared shortcake specifically for her and shared in her enjoyment.

Ms. J.

Ms. J. was a serious 72 year old senior lady, living with her retired military husband in the west end of Ottawa. Their four children were living in various locations.

First Interview

Ms. J. appeared to be tense and reserved throughout the interview. Although she responded to the questions asked she did not appear to be very emotionally involved in her recollections and did not elaborate upon her answers.

Upon being asked to recall pleasant memories from childhood Ms. J. recalled going to her grandparents' as a child of 10 or 11 years old, and being given candies. She related:

Well there's the smell of peppermints...because that was my first memory of my grandparents was going to visit them...always there was a jar of mints that my grandmother would give out to the kids...

I loved my grandma and grandpa very much and...I didn't really want just the peppermints, we just loved to go and see them but that was part of the ritual when you arrived to get a peppermint or a humbug.

When the participant was asked what happens to the memory when she tasted the peppermint, she responded: "I still think of her...I guess, I wasn't really conscious of doing that, but they're one of my favorite candy so...I guess I still think about it." She went on to clarify that it was the peppermint smell more than the taste that she liked.

Another aromatic memory she recalled from childhood focused on the hayloft:

Well, we lived on a farm and I can remember on a Sunday afternoon going up to the hayloft and I can still smell straw and hay, that's where we went to read our books...we probably went from the time we were old enough to climb the ladder up there..

...if I would smell that smell now I would remember being up there with my books...

When asked about kitchen fragrances Ms. J. recalled her mother's biscuits and the chore of taking the biscuits to the farm crew:

I always liked biscuits...in fact, they're what I call my comfort food and it just meant that every afternoon we got a break and went out with our basket of biscuits for the men out in the field.

Although she stated that her mother had canned vegetables and prepared jam and jellies, she didn't recall any specific associated aromas.

When prompted to think of Christmas aromas she recalled the smell of pine and orange: "I think we always had a real tree and I remember the smell of the pine...and we always got an orange in our stocking so that smell is there." This led her to clarify:

...it was not a time when there was a lot of money to spend on ingredients and so on, I think mom didn't do a great deal of baking, she probably made a fruitcake, but I don't remember. All I remember about growing up was that we didn't have very much money and...Dad was away earning another income so that we could keep the farm and mom was very, very busy with livestock and kids and...she was not into fancy baking or...she always made pies and so on, but...

When prompted to recall various pie aromas she associated the smell of nutmeg with apple pie and the lemon smell with lemon pie. When asked how it made her feel to make a pie now she replied: "I suppose I feel good, I feel constructive, I feel as if I'm a homemaker and I think baking does that for you, doesn't it?"

When asked to recall pleasant memories from her teenage years, she first recalled a smell she described as "not a pleasant memory", that of a mixture of castor oil and orange juice which she had to take when she was sick with mumps and measles.

She then recalled the smell of incense and candles from the convent where she went to high school.

The conversation then focused on her adult years. She recalled liking the smell of baby powder and lavender.

...certainly I used it (baby powder) right from the first one (baby)...and my daughters use it for their babies...

It's (lavender soap) a very delicate lavender flavour...or smell, but it makes you feel kind of nice when you wash your face...

When asked about special foods she had prepared in the past for her family she identified chocolate cake and pancakes with homemade maple syrup for the children, and roast pork with apple sauce and angel food cake for the husband. This led her to remark:

Yes, he liked just a plain white, you know, the boiled icing that you...and there again, I suppose if you think about smells, it has its own smell as you're cooking up the syrup or cooking up the sugar and water, pouring it over the egg whites...I suppose if I met up with that smell some place else I'd probably think of angel food cake...

She identified her favourite meals as being rare roast beef and gravy with Yorkshire pudding and probably chocolate cake with date filling. When asked what she would have if she was going out for dinner she replied: "You hardly know what you're going to eat anymore so you tend to go with something...chicken is familiar...so we go for chicken."

When asked if her sense of taste seemed to be muted somewhat, she responded:

Taste yes,...I have noticed that I need...I seem to need a little more salt than I should have had a few years ago I stopped using early recipes cause they were so sweet, now I rather like them...so obviously I'm needing more of a taste sensation than I did when I was younger...

The use of half and half salt was identified to the participant as a salt alternative and Ms. J. remarked: "I'll look for that today when I'm shopping, we are tending to use more salt than we should..."

The conversation then flowed into the effect fragrances had on the participant. Ms. J. related:

...there certainly has been a time when the smell of tea or coffee has had a calming effect, I think I can sit down and have a cup of tea and not feel guilty...to come down off this whirlwind, it's not so much the taste or whatever is in it, it's just the fact that the coffee has been brewing and I can smell it and it means I can

relax...

The participant was offered a cup of raspberry tea, and remarked that it was comforting and relaxing.

When asked if there was anything she would really like to smell at the time she responded:

I don't...my...this is kind of strange...I love the smell of fresh laundry and baking and...but you say would you like to smell it right now, the only thing I'd want to smell right now is fresh laundry. I like the smell of furniture polish and that sort of thing...

She identified the furniture polish she liked as Pledge with lemon.

On the topic of baking she elaborated: "...I still do a lot of baking even though the kids are gone, I bake a lot for the church so the smell of baking, I guess gives me a sense of accomplishment..." and "I enjoy the smell of spices and chocolate", "I use a bit of ginger, but I don't use a great many other spices."

The interview concluded with the conversation focused on memories associated with childhood and the participant's mother. When it was identified to the participant that her face lit up when she discussed biscuits, she replied: "I guess I enjoyed my childhood...". and with respect to her mother, she remarked: "Mom loved to do for others and it was...it was what she wanted to do, to feed others and clothe others..."

Second Interview

The second interview was conducted seven days following the first. Preparations for the second interview included the presence of a slice of lemon, maple syrup, Johnson's baby powder, the spices of cinnamon, cloves and nutmeg, peppermint candy, Hershey chocolate kisses, and ginger candy.

The participant appeared to be more relaxed than in the first interview but was still reserved in her responses. As in the first interview her answers appeared to be factual with

little emotional content. She did not indicate any desire to pursue or elaborate on her recollections.

When presented with a slice of lemon to sniff, Ms. J. associated the aroma with childhood memories of clean hair (rinsed by her mother with lemon) and lemon pie (made by her mother).

The smell of maple syrup she identified with feeding her own children pancakes and maple syrup, a meal she considered a treat because it was an 'easy' meal.

The presentation of baby powder triggered a much stronger reaction. She recognized the smell immediately, commented that she used it for all four of her babies, the oldest of which is 49, and then with the grandchildren. Her appreciation of the aroma was evident in her comments: "Oh, that's Johnson's Baby Powder. Wonderful stuff!...Oh, clean babies...I had four babies, that smell lingers in your nose...and I remember bathing and dressing grandchildren...always the Johnson's Baby Powder"

The introduction of cinnamon resulted in Ms. J. recounting:

Cinnamon buns, my mother made them and I make...apple pie ... coffee cake...Well they're all good memories...the cinnamon buns are a tradition in our house for Christmas morning, always have cinnamon buns...before we open our gifts...the apples pies, I have friends who make apple pies as a project every year, we have for the last ten years...

We do it (make pies) as a fund raiser and we have a lot of fun when we're doing it...so it brings back good memories.

The introduction of the cloves caused Ms. J. to recall the mid-morning coffee breaks, and how they made her feel:

I guess the only thing that cloves remind me of...is making coffee cakes for mid-morning coffee...when I lived in Greenwood they always had coffee every morning and took turns bringing things to eat...

Oh good, because they were a good group of friends and enjoyed our company together.

The introduction of nutmeg resulted in Ms. J. associating it with Christmas and a big crowd of people, of friends and children.

The tasting of the peppermint resulted in a recollection of early memories of her grandparents: "Grandfather, grandmother, grandpa would have them but grandma would hold them for us to take..."

In attempting to clarify what type of peppermint the grandparents actually had, she triggered more details of the memory and described the jar and location:

I even remember the jar that she had them in ...at the head of her bed...It was like a tall one with a curved top...and it was always at the end of her bed...she had built a cupboard at the end of her bed so she put books and things on...

It always stayed there even when she was sick she would remember that they were there and we could have one.

I can remember the room so well...

Next a bowl of Hershey chocolate kisses were presented. Ms. J. related:

That has lots of memories of children...chocolate cakes for birthdays, chocolate chip cookies, all the things that go with raising kids...

Oh I guess mostly when I talk about cookies it's kids coming home from school and always having cookies on hand, usually I was baking as they came to the door and they always brought their little friends with them...

This led Ms. J. to compare herself to her mother: "Mom always felt that when she wanted to give us a treat it was biscuits and honey, for our kids it was always cookies...I guess that speaks of a different money level...biscuits were cheaper to make."

The introduction of ginger did not appear to generate strong memories. She mentioned that her mother used it for gingerbread. She explained that her mother didn't use it in marmalades: "...she put orange and lemon and of course I followed the same pattern for marmalade..."

When asked how she felt about the ginger she responded: "Well, I guess, I think anything to do with what we ate as children or I ate as a child seems to bring back happy memories and happy feelings..."

When asked to identify memories associated with her father, Ms. J. related how her father carried her around when she was very young. She recounted: "...and I can still smell those lilac bushes...they were very big and very strong."

This led to a discussion on the male and female roles which were accepted at the time and the fact that her father was stern and away a lot of the time. She recalled that when her father left, the children would get their mother to make dumplings and syrup, a meal he disliked.

The discussion continued with Ms. J. relating how her brother was sent to Winnipeg for schooling and she boarded with a French family during the winter to attend school at the convent. She described her experience:

...it was an interesting experience now that I think about it... was very much a guest, I was not part of the family, I ate my meals alone in the dining room, they ate in the kitchen and I went to my room afterwards and they had their family gatherings and prayers and so on...so it was a different experience for a young kid.

...I would have liked to have been with them...I felt very lonely sitting all by myself at the big dining room table.

She then explained that because her father was in politics, she was treated special and given respect as his daughter rather than treated as a regular boarder.

When asked if there were any aromas she'd like to smell again she replied:

Mainly because they have good memories, they make me feel good, like the talcum powder, it's something I know won't happen again, there won't be any more babies for me to enjoy, so it brings back a good feeling when I smell Johnson's Baby Powder.

When asked if it's the fragrance she enjoyed, she replied: "No I think I just enjoy what it's associated with."

When asked about the fragrance of lemon, she replied: "Yes, I find lemon is a good feeling...I like cleaning with lemon and cleaning supplies, I like the clean fresh smell of lemon..." She went on to say: "I think I always enjoyed the smell of spices. I like to bake and to take the lid off spices as I'm working and smell them...the smell of chocolate cooking..."

When asked how this made her feel she replied: "I suppose capable is a funny word isn't it? You know, I just feel good I can still do this, I can still make a cake, or I can still make a pie, I can still create something..."

When asked about sniffing the chocolate she replied: "I guess at this point in my life I think of grandchildren and my own children, create something to take to them..."

Discussion of Themes

There were two themes which occurred in both interviews: the need for feeling a sense of accomplishment, and a sense of love and security. A theme which emerged only in the first interview was that of relating aromas to relaxation. During the second interview an additional theme which emerged was the increased clarity of the social memories recalled.

It should be noted that the participant showed little emotional involvement in her responses and showed little desire to expand upon her descriptions of recollections. This was present in both interviews.

Feeling a Sense of Accomplishment. During the first interview, the primary theme appeared to be the participant's desire for a feeling of accomplishment. This is evident in Ms. J.'s use of the word "constructive" to describe how she felt about making a pie, and the actual phrase "sense of accomplishment" when she described the smell of baking for the church. She also alluded to this feeling with respect to her mother when she stated: "...what she wanted to do, to feed others and clothe others."

This feeling was alluded to throughout the second interview when she described enjoying the smells of foods she baked for the various groups and the smell of cleaning supplies. It was specifically re-iterated when she described her feelings as: "I suppose capable is a funny word isn't it?...You know, I just feel good I can still do this, I can still make a cake, or I can still make a pie, I can still create something..."

Love and Security. Although this theme was present in both interviews it was only briefly touched upon during the first session when the participant directly associated the smell of peppermint with the ritual of going to see the grandparents and her love of her grandparents. The feeling of security was also alluded to when she described the weekly occurrence of reading in the hayloft.

During the second interview the feeling of love and security was portrayed much more vividly. Smells were repeatedly associated with caring actions: the smell of lemon with her mother rinsing her hair, and the lemon pie made by her mother; the smell of baby powder to caring for her own children and her grandchildren; the smell of peppermints to her grandmother giving out candies; the smell of chocolate to the preparation of cakes and cookies, and the after school ritual of giving cookies to all the children.

Feeling of Relaxation. During the first interview, there were several smells the participant associated directly with activities which she portrayed as relaxing: the smell of hay and straw she associated with reading; the smell of biscuits she associated with taking a break from chores to deliver biscuits to the farm workers; and the smell of tea and coffee she associated with having the time to relax.

Social Memories. During the second interview, not only did the memories recalled by the participant appear to have more positive emotional content than those recalled during the first interview, they also appeared to be more detailed. Examples of the increase in the positive emotional content was her recall of not only baking the pies as a fund raiser but the fun associated with doing it, likewise for baking the coffee cakes and the friendship of the

women. An increase in descriptive detail was obvious when she described where the peppermints were kept by her grandmother.

Chapter 5

Discussion

This study explored the question "Does the presentation of a positive aroma enhance the leisure memory of older women?". Each of the seven senior women, all of whom had been married and had raised children, were interviewed twice. During the first interview, the participant was asked to identify aromas she considered pleasant with their associated memories. During the second interview, the aroma was physically introduced and the participant again asked to recount aromatic memories. Following review and comparison of the interviews on an individual participant basis, an overall comparison of all interviews was conducted. A model was then developed to aid in the illustration of the findings.

Identification of the Themes and Development of the Model

A review of the actual recollections recounted was undertaken during the interviews. This review indicated that positive emotions were dominant within the recalled aromatic memories. The reoccurring emotions which were identified as themes were: Feelings of Love, Feelings of Security, and Feelings of Warmth and Comfort.

In addition to the recollections of emotions, components of the original setting were recalled. When these components were considered on an individual participant basis, a trend was observed. These components of the original setting appeared to reflect possible personality characteristics of the participant and were identified under the generic theme of Personal Components.

The scope and vividness of the recollections recounted appeared to reflect the receptiveness of the participant at the time of imprinting and recall.

The Model

As indicated above, the memories recalled appeared to reflect five general themes in varying degrees: the receptiveness of the participant; the feeling of love; the feeling of

warmth and comfort; the feeling of security, and personal components imprinted with the aroma which reflected the personality of the participant. These themes were present in varying degrees in the interviews and often interacted and influenced one another. Based on these findings a model was formulated to provide a better understanding of the findings. (See Figure 1.)

The model consisted of a series of circular and oval patterns. Each pattern was unrestricted to allow a fluid motion between each pattern. This indicated that the themes could be interactive.

The center circle was the central axis for the diagram. It represented the "generic" probe aroma which was introduced physically during the second interview as a probe to memory. The larger circular area encompassing the generic probe aroma represented the pleasant aroma as recalled by the participant. The circumference or boundary of this circle represented the receptiveness of the participant. The set of dotted oval patterns represented the themes that were contained in the descriptions of the recalled aromas: feelings of warmth/comfort, love, security and the actual components reflecting the participant's personality. The size of the receptiveness boundary was influenced by the positive emotional environment and the personality of the participant.

This model illustrated that the aromatic memory was recalled not merely as chemical odour but as an aroma layered in positive emotions and the personal components reflecting the characteristics of the participant. It also illustrated that the receptiveness of the participant appeared to be influenced by her own personality as well as the external emotional environment at time of imprinting, and that in turn, the receptiveness defined what components were imprinted as part of the aroma.

Figure 1: The impact of the probe aroma on leisure memory of senior women.

Discussion of Themes Within the Model

A review of the interviews resulted in five themes being identified. The themes of love, warmth, comfort, security and the components reflecting the participant's personality emerged in the wording of the memories recalled. The theme of personal receptiveness emerged from, and was reflected in, the intensity and scope of memories which were recalled.

In the following pages, these themes are discussed on an individual basis, and a discussion then ensues on the comparison of the first and second interview with reference to the themes.

Individual Themes

Receptiveness. A basic theme which repeated itself throughout the interviews was that of the personal receptiveness of the participant. This theme could also be described as the level of awareness (either conscious or subconscious) of the participant to her surrounding environment. A review of the first interviews revealed that aromas recalled as pleasant were identified directly with positive feelings and settings and that memories recalled most vividly and in most detail appeared to be associated directly with strong positive emotional feelings. This indicated that the surrounding emotional environment directly influenced the intensity to which the components of the surrounding environment were imprinted as part of the aroma memory, and further indicated that a positive emotional environment enhanced the receptiveness of the participant to positive stimulus.

In addition to the external environment playing a role in the receptiveness of the participant, the interviews also indicated that the personality of the individual also influenced her receptiveness.

A review of the description of the recalled memories revealed the presence of components which were personal and unique to the participant. This would indicate that the participant herself influenced what components within her environment she tended to be

receptive to and therefore which components were imprinted as part of her aromatic memory (in simpler terms: those components which appealed to the participant would be more likely to be imprinted as part of the positive memory).

One personality trait which appeared to play a role in the participant's willingness to search her memory was that of "personal enthusiasm". This trait would also have been an influencing factor to the participant's personal level of receptiveness at the time of imprinting.

Personal Components. A review of the descriptions of the memories recalled indicated that in addition to the themes of love, warmth/comfort and security, the participant tended to include components, specifically important to her, to describe recalled aromas. These components appeared to reflect the personality of the participant. Their importance as a theme is supported by the consistency to which they occur throughout the individual's descriptions of recalled memories both in the first and second interviews. These components of the recalled memories have been grouped together under one theme entitled Personal Components, because of their personal and unique importance to the participant.

An example of this theme is the noticeable presence of physical activities in the memories of Ms. M. when she recalled the smell of cut grass, pumpkin and apples:

...I didn't associate it with work as much as, the cutting of the grass as liking...being out there and doing it, and the scents or aroma of the garden and things around me too, it was a pleasant aroma.

...there are specific aromas as you carve a pumpkin...

Well I guess I remember carrying home bushel bags of apples and preparing them for pies...

The importance of the activity (personal component) in her perception of the aroma was revealed in her lack of reaction when presented with freshly cut grass: "But to sit here and sniff it, I'm not sure, it doesn't quite trigger them all...in the same way."

Another aspect of her personality was revealed through the prevalence of family gatherings in her recollections:

...and I still get a lot of pleasure of smelling the turkey when it cooks and all the company that go with it...that's a very positive aroma.

...family dinners where there's ten or twelve around the table... and those are happy memories.

I do associate it again with all the things that I did like cooking a turkey, and Christmas and family gatherings, and that sort of thing... it's a sense of tradition, family and things that are important.

A component of the personality of Participant J. was revealed when she described her feelings associated with the smell of chocolate cooking: "I suppose capable is a funny word isn't it." Further examples illustrating this tendency towards a desire of a sense of accomplishment were included in how she described pleasant aromas and descriptions of activities:

Yes, I find lemon is a good feeling...I like cleaning with lemon and cleaning supplies, I like the clean fresh smell of lemon...

...I still do alot of baking even though the kids are gone, I bake a lot for the church so the smell of baking, I guess gives me a sense of accomplishment, of...

Themes of Feelings of Love, Feelings of Warmth/Comfort and Feelings of Security. Three very strong themes which were continually identified by the participants upon recollection of pleasant aromas were Feelings of Love, Feelings of Warmth/Comfort and Feelings of Security. Consideration had been given to combining these themes under a general theme of positive emotional feelings due to the fact that participants tended to cite combinations of these feelings to describe the recalled aroma. This consideration was discounted when the first and second interviews were compared and the results indicated that the quantities and vividness of memories associated with the specific feelings increased

during the second interview (this expansion was explored and presented in the sub-section dealing with the comparison of the first and second interviews).

Examples to illustrate the use of the feelings of warmth and comfort to describe recalled aromas were taken from the interviews held with participants W. and C.

The chalk smell and we all had to take turns cleaning the board and then taking the little erasers out and spanking them together...I was happy at school so when I would get in, that was just a nice comforting smell. (Ms. W. recalling the smell of chalk).

Yeah, I smell flowers, roses especially, when I smell roses I feel happy, warm...some of the roses smell just gorgeous. (Ms. C. recounting how she sniffed roses because of how they made her feel).

The warmth was...the warmth and love in our family...looking back now I realize that that smell was associated with love and warmth...we knew mother was baking bread we'd rush home from school... (Ms. C. describing molasses on hot bread).

The feeling of love was often coupled with other feelings to describe settings. Two examples where it was used independently to describe the feeling of a recalled aroma were:

...A lovely feeling yes. Oh it just turns my heart right over when I come upon it now. (Ms. W. describing 'Balm of Gilead').

The love of my grandmother, the security of my grandfather (Ms. L. describing the feelings associated with rice pudding).

Ms. W. provided an excellent example of the feeling of security she felt with the description of her recollection of hot cocoa:

It was so comforting..., Well, it created a security feeling in me, it was...Mother was there, home was there and I was...my feet had been so cold, and the cocoa does seem to be spreading the comfort and pleasure all through me (Ms. W. recalling hot cocoa).

Introduction of the Probe Aromas and Comparison of Recollections Between Interviews. The purpose of the probe aroma was to identify the impact that the introduction

of a positive aroma had on memories recalled by a participant. In order to do this, the participant first had to identify what she personally considered a positive aroma and then identify, in the absence of the actual aroma, what memory she recalled associated with that aroma. This identification was performed in the first interview and formed the baseline for comparison to memories recalled following the introduction of probe aromas during the second interview.

During the second interview, several probe aromas were presented individually to the participant. Most of the probe aromas caused the participant to react positively with expressions of enthusiasm, happiness and comfort, while a few of the probe aromas resulted in either no reaction or one of disappointment.

The extent to which the probe aroma triggered a positive emotional and verbal reaction, and aromatic recollection from the participant appeared to be influenced by how closely the probe aroma matched the identity of the aroma as recalled by the participant.

The delighted reaction of Participant W., when presented with a cup of hot cocoa, clearly illustrated the case in which the probe aroma very closely matched that of the participant's recollection of the aroma: "Oh...I want to put my feet in the oven! Oh that is beautiful!" (Ms. W referring to the childhood kitchen setting where she would drink cocoa and warm her feet).

Another example is provided by the instantaneous reaction of participant C. to the introduction of molasses and the flashback it caused:

Oh my! That is...this is...I can almost say this is Tancook Island. Now I was born on Big Tancook Island. Because remember when I was eating that the first time, see my mind was working on this aroma and I thought right away of my brother-in-law and having that molasses for his lunch...that brought back a flash, that was the flash...

As stated, there were probe aromas which when presented to the participant resulted in either a neutral (simple acknowledgment of the item) or the negative reaction of

disappointment. As the second interview progressed, the participant quickly realized that the probe aromas being presented reflected the participant's personal preferences. Therefore when an aroma was presented that did not immediately trigger a pleasant recollection, the participant verbally expressed disappointment. Two of the participants reacted to their disappointment by increasing their effort to sniff the probe aroma in the hope that the probe aroma would eventually trigger the aromatic recollections. The following excerpts expressed this disappointment:

Upon sniffing a basket of cut grass Ms. M. reacted with:

...but to sit here and sniff it, I'm not sure it doesn't quite trigger them at all...in the same way. You know there is definitely a fresh grass aroma there but it's not quite the same as you'd get from a full yard of freshly cut grass and ...I think it's more that just seeing a basket with grass in it...even if it was just cut a half hour ago.

Upon sniffing a carnation, Ms. C., reacted by trying to justify why it did not trigger any recollections, what she thought it should have smelt like, and then after repeated attempts to find the smell, her confirmation of its lack of the expected recollections.

I don't think flowers smell like they did years ago.

...the carnation, boy you smell it and everything burst in your nose...and in your head when you smell...

...cinnamon and spicy...real spicy...well to smell a carnation would almost make your mouth water...you know a real carnation...the same way with smelling those roses...the real old-fashioned bouquet really did something to you...

No that doesn't do anything...

When a probe aroma was presented that did trigger a positive reaction, the participant generally reacted by vocalizing her instantaneous reaction and then describing her feelings and the setting of the memory triggered. A direct link of the triggered recollection to the probe aroma could be identified when the participant recalled the item

producing the aroma. This was demonstrated previously using the probe examples of the hot cocoa (Ms.W.) and the molasses (Ms.C.). An additional example was the introduction of the probe aroma of nutmeg to Ms. L.:

I can tell by looking at it, what it is...Oh, my goodness, I can see the stove, the wood stove... with the nice decoration over the top and the nice oven door...oh yes, there's the rice pudding.

Once the initial memory triggered by the probe was described, then the participant proceeded to recall other memories. Some of these secondary memories appeared to be linked directly to the probe smell through the recall of similar aroma-producing items. An example of this was when lemon was presented to participant J., she first recalled her mother rinsing her hair with lemon, then recalled the lemon pie made by her mother. Another example is the reaction of Ms. L. to the presentation of allspice: "...it's reminding me of the plum pudding....and it reminds me now of my tourtières. ... This is great!"

Other secondary memories recalled appeared to have both a direct link to the probe aroma as well as being linked by similar emotions. The presentation of the molasses to participant C. triggered the happy childhood recollection of being at her sister's, then the recollection of coming home from school to her mother's kitchen, and then to enjoying molasses with her own adult son. All memories although directly associated with molasses also had the underlying emotion of family love and security.

Other secondary memories recalled appeared to have had no direct link to the probe aroma other than they appeared to contain recollections of similar feelings or similar personal components of the originally triggered memory.

The presentation of a small bowl of sage to Ms. L. provided an example of this progression of memories triggered by the theme of love (and family). The sage triggered successive recollections of having goose at her grandparents at Christmas time, her

grandfather growing horseradish, her grandmother making Yorkshire pudding, and going to buy ice-cream cones while at her grandparents' home:

We had goose, my grandfather always got goose from the railroad, so we had goose.

...my grandfather grew horseradish and maybe that's why I like it so much and I can remember when I taste horseradish or smell horseradish I remember following my grandfather in the garden...and he said, taste this, and I tasted it and it was very hot. Then he would grind that and make his own horseradish for the winter.

...because I've seen my grandmother do it (make Yorkshire pudding) and of course the pan was always very hot and smoking when she would put the batter in it...

...It was a nice experience and she (grandmother) would give me five cents in a honey pail to go and buy ice cream cones. Two nickels from the honey pail and I'd have to hurry down, all the way down a country road to _____ Store in Naven and get two ice cream cones and then hurry and get back and it was a long ways before they melted.

The presentation of a small bowl of strawberry shortcake to Ms. A. provided an example of this progression of memories triggered by the sub-theme of sharing (one of the personal components of the participant's memories). The probe triggered recall first of the memories associated with her preparing strawberry shortcake, anticipating sharing it with her family, and her family's enjoyment of it. Ms. A. later expanded the scope of the recalled memories triggered to include memories of her family preparing things especially for her, immediately followed by descriptions of how it made her feel to receive and also to give.

And one time, oh years ago, it was my birthday and Janet had made cream puffs but with strawberries in them and on top, and she had said go in the sun room and she had a table there...then about months ago we were over at for dinner and they had strawberry shortcake, a special treat for me...my family all know that that is a special treat...and I think things if they're kept, they are special.

Well I was very delighted back then and a couple of months ago the girls made strawberry shortcake because...I knew it was made because I especially like strawberries...so that pleased me greatly...pleasant, pleasantness, and joy...and joy because people made them for me.

I'm excited and I'm happy and I'm pleased...you know how much fun it is to do something for somebody that you know that they are going to enjoy...once in a rare blue moon you find a gift that you know somebody is going to like.

_____ and almost childlike...look I made this for you! Especially! Isn't that wonderful!

This progression of recollections continued along a different route when Ms. A. recalled the smell of onions being fried at the exhibition, (and the noise and the rides), followed by recollections of childhood wiener roasts and the wood burning, then to the smell of leaves smoking and burning in the fall, to kicking through the leaves and the associated smell. This progression appeared to have been triggered simply by the association of autumn burning smells.

Comparison of the Interviews

As discussed previously a basic theme which repeated itself throughout the interviews was the receptiveness of the participant. This appeared to have been influenced by both the external environment and the participant's own personality. A review of the actual descriptions of the memories recalled indicated that this issue of receptiveness appeared to play a role at the time of imprinting. The participant's willingness to "search" her memory and be receptive to her recollections appeared to play a role at the time of recall. During both interviews this willingness appeared to expand as she became more relaxed and comfortable with the interview process and setting. In addition, the level of enthusiasm exhibited by the participant also appeared to increase as the participant recounted memories and realized the vividness of the memories triggered.

A comparison of the two interviews indicated that the participant appeared to be generally more relaxed, receptive and enthused with the interview process at the beginning of the second interview than during the first interview. This sense of comfort and enthusiasm appeared to increase as the interview progressed with the presentation of several personally identified pleasant aromas.

This increase in willingness was obvious in the progression of responses provided by Participant B. who at the beginning of the interview one provided minimum response to questions asked and was volunteering information with no prompting at the end of interview two. The following excerpts of the interviews demonstrated this change in receptiveness:

At the beginning of Interview 1:

The only one I remember very vividly is when my mother made bread, the smell of baking bread. We always had dogs, great big, hairy dogs, and I remember the smell of a big ____ dog, you know ...doggy smell.

Research Probe: When you speak about bread, what was distinctive about it?

I just knew my mother was baking bread when I came in, I could smell the bread baking...I don't know what was distinctive about it.

Research Probe: How did it make you feel?

It made me feel this was home.

Research Probe: And were you able to...did you generally have a slice then or...?

I don't remember really, I don't recall.

Research Probe: Do you remember what you put on the bread?

I assume it was butter.

Towards the end of Interview 1:

We had a fireplace when I was young and we used to burn wood and coal and that and I remember the smell of

the fires, sitting around the fire in the winter, and in the summer at the cottage, sitting around an open fire, open fireplace.

At the beginning of Interview 2, upon presentation of the first probe aroma of baking bread: "Marvelous! Oh gorgeous!" (referring to how it tasted.)

Towards the end of Interview 2, as Ms. B. described various trips she had taken:

A couple of years ago I went to Greece in early spring, the very first tour in the beginning of March and the place was full of oranges... I know there was one young lady on our bus and we were walking down a little street in one of the small towns we were touring and she reached up and pulled an orange off the tree you know just beside the road and a woman came dashing out of their house you know, and the poor girl she thought she was going to be really told off, but the woman couldn't speak any English, she took her by the arm, dragged her in and gave her a great big bag of oranges! You know, you get the orangey smell when they're ripe like that right off the tree they taste so much better than buying them in the store.

A comparison of memories recounted in the first and second interviews indicated a general increase in the vividness of the detail recounted in the second interview. As suggested previously, the external environment appeared to influence the participant's receptiveness to her recollections, and her willingness to "search" for details. Therefore the presence of the personally-identified pleasant aromas was also a contributing factor to the increase of the vividness of the memories recounted.

This difference in level of detail recounted between the two interviews was exemplified by participant J. and participant W.

During the first interview, Ms. J. remarked "always there was a jar of mints". During the second interview following the introduction of the mint candy probe aroma, she recounted:

I even remember the jar that she had them in ...at the head of her bed...It was like a tall one with a curved top...and it always was at the end of her bed...she had built a cupboard at the end of her bed so she put books and things on...

It always stayed there even when she was sick she would remember that they were there and we could have one...I can remember the room so well...

During the first interview, Ms. W. described her recollections of mint:

Mint! Now around our front door, where the door step came up to the house, there was a little bit of earth there and mint grew there...

During the second interview, following the presentation of the mint probe aroma, she recounted more "emotional" details:

Well going out and sitting on the front step of my parental home with my mother. So of course just happy, content...the mint was there, right at our feet...I'd reach down and pinch a leaf...

These examples illustrated how vivid the recollections were and also how the participant seemed to actually visualize themselves as part of the memory; "I can remember the room so well...", "I'd reach down and pinch a leaf...".

This increase in the vividness of recall applied not only to the physical setting of the recollection but also to the emotions associated with the recalled aroma. A comparison of the first and second interviews indicated the emotional reactions of the participants were more intense in response to the physical aroma probe (second interview) than the mental probe (first interview). Participants tended to express their delight with how they were feeling more frequently during the second interview. Several participants welcomed the feelings the recollections were generating and expressed their intention to actively promote these feelings by re-introducing the aroma into their daily lives again.

This progression of vividness of emotional recall and the intention to promote the feelings was demonstrated by Ms. W. and the aroma of hot cocoa:

It was so comforting...Well, it created a security feeling in me, it was...Mother was there, home was there and I was...my feet had been so cold, and the cocoa does seem to be spreading the comfort and pleasure all through me. (Ms. W. recalling hot cocoa in Interview 1).

Oh...I want to put my feet in the oven! Oh that is beautiful! (upon presentation of the hot cocoa).

Oh something else beside just comfort (response to how it made her feel).

I guess I'll have to have another sip of this. It's lovely. Lovely. It's just so good. I'm going to try that now. Cause sometimes when I'm going to bed at night, I've had my three meals and I know that I shouldn't have anything else, but sometimes when I'm going to bed I am hungry, just a cup of cocoa, oh!... (stating her intention to include hot cocoa as part of her daily life).

As discussed in the previous section, the introduction of the probe aroma often resulted in the recollection of secondary memories after the original recollection was triggered. These secondary recollections appeared to be triggered by the probe aroma in a rippling effect. Some recollections were linked through similar aroma-producing items, others appeared to contain recollections of similar feelings or similar personal components of the originally triggered memory. That is to say the recall of a positive emotion associated with the original memory (stimulated by the probe aroma), in turn triggered the recall of additional memories associated with that specific positive emotion. This appeared to occur with all the themes of warmth/comfort, love, security and personal components. Thus a rippling effect occurred with positive recollections triggering additional positive memories.

Although this progression of recollections appeared to occur in response to both the mental probe and the physical aroma probe, comparison of the first and second interviews indicated that quantities and scope of the recollections recalled increased during the second interview. This was exemplified in the interviews with Ms. L. During the first interview she appeared to limit her positive childhood recollections to only her grandparents while in the second interview, the scope of her recollections expanded to include positive childhood memories of other family members including her mother, father and brother.

Conclusion

At this time there is insufficient amount of literature concerning the impact of pleasant sensory stimulus on the memory of senior women. Previous literature dealt with the memory of seniors in relation to the quantitative recall of past events and on reminiscing about previous experiences and feelings. These two approaches are known to strengthen personal identity and to offer some relief from unhappy situations (Cohen, 1989).

While memory is considered a valuable asset for solving every day problems there are other aspects of this reusable resource, which require consideration with relation to leisure satisfaction and life satisfaction for the older women.

The literature, in understanding leisure, has often been associated with frequency of involvement not in the context of the experience, while the present research focuses on the context of the leisure experience. In defining leisure, Heywood (1979) states that the leisure activity itself is neutral until the person brings his or her own awareness to the activity. This present research revealed that the participants themselves had determined the value of positive aromas in their life span by actively pursuing the presence of positive aromas. The interviews resulted in an increase in the participants' awareness of the positive impact that positive aromas had on their emotions, and increased their desire to promote the presence of positive aromas in their immediate surrounding environment. This aspect of the leisure experience is particularly important for seniors considering,

leisure satisfaction contributes much more than mere leisure participation to the life satisfaction of older persons...the value of an activity is not only determined by the frequency of engagement in it, but also by its meaning, attitude, quality and state of mind (Ragheb & Griffith, 1982, p.302).

With respect to the olfactory sense, the findings of this present research concur with previous literature stating that "odours are intimately wired with emotions and memories" (Freedman, 1991, p.73).

Cohen's (1989) investigation revealed that the subject, when recalling personal experiences is both the experience and the product of the experience; memories elicited by a time based cue such as a phrase, smell or movement are often recalled instantly and with clarity, and the memorability of an event is affected by the level of personal, physical and/or emotional involvement at the time of the event and by the individual's mood both at the time of encoding and recall. Herz and Cupchik (1992, p. 519) stated that "odour evoked memories tended to be highly emotional, vivid, specific, rare, and relatively old." The present investigation concurred with these findings.

Gibbons (1986, p.327) stated "Odours suggest, stimulate associations, evoke, frighten, and arouse us, but they seem to lie below conscious thought". The present research indicated that a sub-conscious progression of recollections appeared to occur in response to both the mental and physical probe aroma. Some recollections being linked through similar aroma-producing items, others appeared to contain recollections of similar feelings or similar personal components of the originally triggered memory. Thus a rippling effect occurred with positive recollections triggering additional positive memories.

The literature suggested the memories recalled by a participant would be associated with a unique event and intense emotions. The finding of this research indicated that the feelings associated with the recollection of pleasant aromas were generally identified as the stable emotions of love, warmth/comfort and security while the settings recalled were typically those of everyday occurrences.

This investigation used a qualitative approach and was limited to seven senior women who had been married and raised a family. The participants were interviewed individually in two separate sessions. During the initial interview, a series of open-ended questions allowed the participant flexibility in recalling and verbalizing memories of pleasant aromas. During the second interview, various aromas identified in the first

interview as being positive were introduced and the participant was encouraged to vocalize recollections and feelings.

The qualitative approach allowed the researcher to understand the experiences of the senior women and to discover the differences and similarities of the childhood they experienced and how their memories continue to affect their daily lives. It allowed the participant to recount the recalled aromatic experiences in her own words in a supportive environment. It also allowed the researcher to find emerging themes and discuss them within the context of the sample.

This methodology enabled the researcher to understand the impact a designated probe aroma had on a senior woman's memory of events and feelings. In addition it opened up new avenues of research in relation to leisure research for senior women.

This investigation did experience some limitations because of the sample interviewed. The selection technique, that of word-of-mouth, resulted in seven middle class older women being interviewed. At the time of research, the participants were all independent, active urban dwellers. This could have limited some themes from emerging and have prevented other issues from being uncovered.

Although the participants were originally from diverse backgrounds (farms, fishing village, small town and a city), their childhood memories were remarkably similar in life style. The common characteristics of having a caring maternal presence during early childhood, and later being married and raising a family allowed for similarity in their experiences.

It should be noted that due to the limitations of the study the analysis of the material was relevant for the participants who were interviewed and should only be examined within the context of this framework.

Future Research

This investigation allows future researchers to build upon the information that was revealed to create new avenues for research.

1. Further investigation could be undertaken with regards to the "rippling" effect where positive recollections trigger additional positive memories.
2. Each of the other four senses which receive stimulus from the external environment could be investigated for its impact on the individual, and the memory.
3. The investigation of senior men could provide a diverse set of personal memories with an entirely different perspective on the relationship between sensory stimulus, memory and leisure and life satisfaction for the senior man.
4. This investigation also presents the groundwork for research into areas such as the importance of positive sensory stimulus in relation to mental and physical well-being and the cultivation of an increased enthusiasm for living.

Recommended Program

The process of requesting a senior woman to identify a personally pleasing aroma from childhood, then focusing in on the feelings associated with this aroma memory appeared to result in positive feelings being experienced in the present. The introduction of the actual aroma in the present appeared to trigger the experiencing of those positive feelings more vividly. This appeared to result in the senior woman herself recognizing that the presence of that specific pleasant aroma in her environment caused an improvement in her immediate feelings. The senior woman expressed the intent to pursue these feelings by taking steps to ensure the presence of that aroma in her immediate surroundings. She expressed the intent to help herself to improve her own environment.

A program could be implemented following the same process of having the participant identify personally pleasing aromas from childhood and describing her

associated positive feelings, followed up at a later date, with the introduction of the actual specified aroma and the participant again describing and elaborating on her memories and feelings.

The steps of such a program could include:

Stage One:

1. Participant identifies pleasant aromas from childhood.
2. Participant describes setting and feelings at the time of imprinting.
3. Participant describes feelings being experienced in the present.

Stage Two:

1. The aroma identified as pleasant in Stage 1 by the participant is physically introduced.
2. Participant describes reaction to aroma and feelings experienced.
3. Participant is encouraged to recall additional memories associated with the aroma or with the feelings triggered by the aroma.
4. Participant is encouraged to elaborate on what she is feeling.

Result:

1. Participant experiences an increase in positive feelings.
2. Participant may recognize by herself how much better she feels as a result of sniffing a pleasant aroma recalled from childhood and experiencing again the associated feelings.
3. Participant may express the intent to take steps to re-introduce the aroma into their every day life in order to experience the feelings.

This program would be most effective as a one-on-one basis between program administrator and participant, since individualized attention would tend to encourage personal response from the participant; and pleasing aromas are specific to each participant. As an alternative, the program could be administered in a group setting, provided individual

memories are considered vital and individual stimulus are also specific to the memory of each participant.

This program concept could also be adapted for use with mentally confused adult patients through the use of the relatives identifying aromas they recalled the patient enjoying during childhood.

Appendix A

Interview Guide

Preamble Statement

During the next hour I would like you in your own words to respond to the following questions:

Questions

1. Please describe any pleasant aromas that you remember from when you were a child, and how those aromas made you feel.
2. Please describe any pleasant aromas that you remember from your teenage years and how those aromas made you feel.
3. Please describe any pleasant aromas that you remember from when you were raising your own family and how those aromas made you feel.
4. Please describe any pleasant aromas that you find enjoyable now and how they make you feel now.

Appendix B

Letter of Consent

I understand that the purpose of this study is to explore the role of positive aromatic memories in senior women's lives. I have been asked to participate in two interviews to discuss my personal experiences and memories as they relate to aromas.

I understand that the interviews will be conducted at 99 Grove Avenue in the City of Ottawa at a time that is convenient.

The interview is scheduled for two hours. I am free to withdraw my participation at any time during the process. The interview will be videotaped and used for the reporting of this paper. Following this process, the tapes will be erased.

In order to ensure confidentiality, the names of the participants will be changed in reporting the procedures.

I agree to participate in this study,

Signature of Participant _____ Date _____

Signature of Researcher _____ Date _____

If you have any questions, please call me at (902) 445-9108.

Sincerely,

Margaret Snyder

Appendix C

Interview Logs

Interview Logs: Preamble

For several years, I have been convinced that a pleasing external sensory stimulus when welcomed does have an immediate positive effect, for a brief moment, on my own sense of well being or enthusiasm for being alive. In recognition of this personal bias I deliberately tried to minimize my own emotional input during the recording of the interview logs. Therefore the interview log-journals for each participant were predominantly factual records of the settings and events before, during and after the actual interviews. The recording devices and transcriptions provided the necessary documentary details for the actual research.

The following paragraphs summarize both the excitement and the apprehension experienced by myself during the ups and downs of the interview process.

I had tried to create a friendly atmosphere suited to the generation of women over 60. Being a cohort of 76 years old, I used my own experience to create that welcoming environment. The participants were welcomed, and relaxed with me on the veranda which would have been a familiar greeting to these women. Following a few minutes of social conversation, we then entered the house. The dining room itself was used as the interview setting and had previously been prepared with a fresh pot of tea waiting to be served.

One of the major apprehensions I experienced during each interview was the mechanics of setting up the recording equipment and ensuring that it was functioning properly with the proper lighting, sound, timing, etc. It was difficult to appear relaxed and confident in front of the participant at the beginning of each interview when I was unsure of whether I had correctly set up/started the equipment. Surprisingly the participants themselves did not appear to be inhibited by either the video or audio tape recorder, in fact the machines appeared to be ignored shortly after the start of the interview. The initial presence of the recording equipment along with the fact that I was taking notes

appeared to lend more credibility to the interview from the participants' point of view.

Once the interview was in progress happy memories started bubbling up from most of the participants and it was as if I suddenly knew that the bias was not a figment of my imagination but an actual fact. The women were not only remembering happy events from their childhood of 50-70 years ago, but also reflecting the feelings they experienced years ago in their glowing faces and excited voices. They were there in that instant but at the same time they were here, as they shared with me the wonder of both what they did feel then and what they were feeling in this instant.

The vividness of detail recalled and the actual emotions triggered and experienced seemed to amaze the participant as much as myself. It wasn't the memories so much as the feelings triggered which seemed to impel them to continue relating other times and places.

Not all the participants reflected this enthusiasm for talking about their memories at the start of the interviews. I am still unsure whether this was a simple reluctance on their part to divulge personal experiences or whether it was a result of the personal interview process. Their reluctance to elaborate on responses left me feeling inadequate and frustrated, which was probably sensed by the participant. But over the course of the interview, even the reluctant participants recognized that, by recalling pleasant aromas they were also experiencing the associated pleasant feelings, and so were more receptive to the current positive environment and opening their memories up.

I felt comfortable listening to their aromatic recollections and was able to relate to them since I was a cohort of similar age with memories and frailties to match. This empathy appeared to work both ways with the participant appreciating their recollections being heard in context. It was interesting to realize that during some of the second interviews, it was as if I was not there as a person more as a sounding board. The "conversations" took more of the form of audible thinking by the participants.

As the second interviews progressed, my own feeling of elation increased as I realized that the participants were all recalling a wide range of memories which surprised and delighted them, and that the participants themselves were recognizing independently the importance of the feelings that these memories were triggering. The "icing on the cake" was when several participants expressed a specific intent to have the aroma present in their current daily lives because of how it made them feel.

Once the interview was over and with it, my worry that the recorders might not be working properly, I was able to thoroughly enjoy the company of the participant. We moved to the veranda and if she did not have a pending appointment, quite often, we sat and had an enjoyable conversation. Her memories were still stimulating more memories, experiences and enthusiasm. We both appeared to thoroughly enjoy the after-interview conversations.

INTERVIEW LOG: PARTICIPANT A

1st Interview: August 19, 1996

ANTICIPATION!

Prior to the participant's arrival the dining room had been prepared with video camera, audio tape deck, and pen/paper for recording of the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

Ms. A., the participant, arrived on August 19, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was a smiling, out-going senior, who appeared to be pleased to be taking part in the research project. Within a few minutes, we moved into the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, regarding the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary.

On being asked to recall pleasant aromatic memories from childhood, Ms. A. immediately beamed and spoke of happy days of home, school and family. During the relating of these events, aromatic memories of chili, apples, oranges, bread, and roast beef, bubbled up. One of those which caused her to light up the most was her recollection of strawberry shortcake with whipped cream, which she highlighted as a sharing experience.

As the interview progressed, her enthusiasm heightened and her range of recalled aromas, events and emotions broadened. It was during this time that the interviewer was scribbling brief notes as a prompt to additional questions, if prompting appeared to be required.

REFLECTION!

After the interview, as she sat on the veranda for few minutes, she appeared to come down from a high and talked a bit more about other memories. She mentioned that, when she saw the interviewer taking notes during the interview, she felt that what she was saying was important. She seemed to have forgotten that the camcorder and tape deck were running and recording every smile, gesture and spoken word during the entire session. She was then thanked for cheerfully helping with the research.

Following arrangements to return on August 28, 1996 at 10 a.m., Ms. A. was picked up and driven away by her husband.

INTERVIEW LOG: PARTICIPANT A

2nd Interview: August 28, 1996, 10 a.m.

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, a serving of strawberry shortcake, which consisted of; fresh strawberries, baked tea-biscuits and whipped cream, was prepared and placed on a covered tray on the buffet.

Ms. A. arrived on August 28, 1996 at 10 a.m. she smiled happily and appeared excited about the second interview.

EXPERIENCE!

After being settled and served tea, the serving of strawberry shortcake was presented. Ms. A.'s reaction was instantaneous, with words, (delicious, nectar of the gods) and gestures (lifting her hands, palms upward) to express her pleasure in the smell, the taste and the look of the colourful dessert. Her recollections were numerous and delightful, covering aromas, emotions and events of her life. Sharing was one of the important facets of her memories both in being the recipient and being the giver. At this point she mentioned, what a "dreadful affliction" to be living without a sense of smell, and "...people do not bother to smell things!"

REFLECTION!

Again, it was after the interview, as she sat and relaxed on the veranda, that the conversation continued. It was as if the memories released could not be turned off that easily. The surprising part was that all her recollections were pleasant. At this time, thanks were extended to Ms. A. for her time and gracious help during the sessions. Later a token of thanks was forwarded to her and a promise to keep her posted on the outcome.

NOTE:

Surprisingly all the participant's recollections appeared to be pleasant both during

and after the interview. Maybe she was basically a happy person, but then she could not have lived for seventy-five years without encountering the downs of living. Could it be possible that introducing a pleasant stimulus could trigger more positive memories over negative?

INTERVIEW LOG: PARTICIPANT B

1st Interview: August 17, 1996

ANTICIPATION!

Prior to Ms. B.'s arrival the dining room had been prepared with video camera, audio tape deck, and pen/paper for recording of the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

Ms. B. arrived on August 17, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was an alert, active senior lady, eighty years of age, and although she was relaxed, she was not particularly interested in the proceedings. After a short interval we moved into the house and the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, in regard to the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary. Ms. B. listened carefully but showed very little active interest.

On being asked to recall pleasant aromatic memories from childhood, Ms. B. mentioned baking bread, and said it meant she was home. At the same time she referred to the doggy smell of very large dogs, which could not be bathed very easily but only tolerated. After this, as the interview continued Ms. B. appeared to become more interested and replied with greater fluency. She spoke of the special smell of fireworks on May 24, her birthday, and how she enjoyed the smell of wood burning at the cottage, "a happy sort of smell". Late she described flower fragrances and kitchen aromas as if she was recalling someone else's memory. At one point as she was discussing mint, her face lit up when she

mentioned how her mother made mint jelly and then mint with vinegar.

REFLECTION!

After the interview, she stayed on the veranda for a few minutes while I thanked her for coming and helping with the research. Arrangements were then made for her to come for the second interview on August 24, 1996 at 10 a. m. She then walked briskly away towards her home.

INTERVIEW LOG: PARTICIPANT B

2nd Interview: August 24, 1996, 10 a.m.

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations included the presence of cinnamon tea, freshly baked crusty bread, a pine bough, chocolate coated ginger, and cloves. All the items except the bread and cinnamon tea, were placed on a covered tray on the buffet.

Ms. B. arrived on August 24, 1996 at 10 a.m. and was met on the veranda. The participant appeared relaxed and much more interested in continuing the second interview, but she did mention she was not smelling very well.

EXPERIENCE!

After she settled and was sipping cinnamon tea, her interest and enthusiasm appeared to increase as the interview progressed. When a loaf of freshly made crusty bread was presented there was marked change in her attitude, her face became animated and her voice excited. It seemed that both the smell and taste acted as stimulants and altered her mood and behavior. When told the frozen bread dough could be bought and then baked at home, she stated she would buy and bake it herself. Following this, different previously mentioned (first interview) aromas were introduced and most of them triggered reactions of smiles and gestures. When she realized the aromatic goodies were over, Ms. B. smiled and expressed her thanks for how it took her back and made her feel those times of happy memories. She then reminisced about how she always loved roses and going to the Botanical Gardens and also travelling to far away places.

REFLECTION!

Again, it was after the interview, as she sat and relaxed on the veranda, that she took a deep breath and murmured, "This has been good. Thank you again."

At this time my thanks were offered to Ms. B. for her time and generous help during the sessions. Soon after this she went down the steps and walked along toward her home.

NOTE:

There was a striking change from the beginning of the first interview to the end of the second, it was as if she changed personality, right before my eyes. Later a token of thanks was forwarded to her and a promise to keep her posted on the outcome.

INTERVIEW LOG: PARTICIPANT C

1st Interview: August 20, 1996

ANTICIPATION!

Prior to Ms. C.'s arrival, the dining room had been prepared with video camera, audio tape deck and pen/paper for recording of the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

The participant arrived on August 20, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was a smiling, confident seventy-five year old lady, although a recent widow, she appeared pleased to be included in this research project. Within a few minutes, we moved into the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, in regard to the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary.

On being asked to recall pleasant aromatic memories from childhood, Ms. C. immediately and with enthusiasm recounted numerous delightful aromas from her childhood along with the feelings of warmth and love of her family. She mentioned several times, how often she would make and bake fragrant goodies which she had enjoyed as a child, for her own family. She continued and spoke of how much she enjoyed sniffing carnations, roses and rosemary, after rubbing the herb on her hands. In addition, she spoke about how much she used to enjoy smelling, tasting and making wine with her husband. Listening to her light-hearted words and seeing her glowing face was like watching her ride a fragrance merry-go-round. She also appeared to be transported by her

present memories of her own past events.

REFLECTION!

When the interview was over she relaxed quietly on the veranda for a while, she appeared to be lost in her memories. Later she mentioned how good it had made her feel to be allowed to talk about those happy days. And even the days of sadness, for, as she recalled, at seventy-five there were many of her family and friends who were not around. She then remembered that Clary (her husband) always gave her the perfume, Chanel # 5.

She was then thanked for coming and cheerfully helping with the research. After making arrangements to return on August 28, 1996 at 10 a.m., Ms. C. drove away.

INTERVIEW LOG: PARTICIPANT C

2nd Interview: September 6, 1996, 10 a.m.

Due to recording difficulties, this interview was not able to be transcribed, therefore the brief notes taken during the interview were discarded and arrangements were made with the participant to re-schedule another interview for September 11, 1996.

INTERVIEW LOG: PARTICIPANT C

3rd Interview: September 11, 1996, 10 a.m.

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations included the presence of tea, freshly baked bread, whipped cream, (sweet cream), molasses, brown sugar, carnation blossoms, chocolate kisses. All the items, except the tea and carnations were on a covered tray on the buffet. The tea was served prior to the start of the interview, while a vase held the flowers.

Ms. C. arrived on September 11, 1996 at 10 a.m., and was met on the veranda. She appeared very relaxed and comfortable with the thought of the third interview. (Due to technical difficulties video camera did not record) the session had been rescheduled). The move to the interview room occurred soon after.

EXPERIENCE!

After being settled and served tea, Ms. C. was ready to enjoy the morning. On being offered a series of previously identified pleasant aromas from her recalled memories, she expressed her delight with laughter, hand gestures and body language. She explained how much she enjoyed the special fragrances from her childhood and how often she tried to recreate and share them with her family. She experimented with different combinations of bread, molasses, and sour (sweet) cream and then adding brown sugar. While doing

this she smiled frequently and murmured, "This is good!" Her feeling were very near the surface when she told of times with her childhood family and with her own family of grown children.

REFLECTION!

Again, it was after the interview, as she sat and relaxed on the veranda, that the conversation continued quietly as she spoke of how the sessions had allowed her to feel more relaxed. At this time, thanks were extended to Ms. C. for her time and gracious help during the interviews. She then drove herself home. Later, a token of appreciation was forwarded to her and a promise to keep her posted on the outcome.

INTERVIEW LOG: PARTICIPANT J

1st Interview: September 18, 1996

ANTICIPATION!

Prior to Ms. J.'s arrival the dining room had been prepared with video camera, audio tape deck, pen/paper for recording of the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray was set up to welcome the participant.

Ms. J. arrived early on September 18, 1996, for her first interview, and was welcomed directly to the interview room. Ms. J. was a seventy-two year old senior, who was actively involved in volunteer work and studying at Carleton University, a recent B.A. Her manner appeared to be somewhat tense and reserved as she came in, while her husband waited in the car across the street.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, regarding the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary.

After being settled, Ms. J. was asked to remember and describe pleasant aromatic memories from her childhood. Although Ms. J. responded to the questions asked with the factual aspects of the events, she did not seem to be emotionally involved in her recollections and did not elaborate on her answers. As the interview progressed the participant identified a number of aromas which were present while she was growing up, but there appeared to be very little enthusiasm about either the original event or the memory.

REFLECTION!

Immediately after the interview, she mentioned having another appointment, and left soon after she had been thanked for coming and arrangements had been made for her to return for the second interview on September 25, 1996 at 10 a.m.

NOTE:

The participant appeared to be preoccupied during the interview and I had the feeling she had agreed to come as a favour to a friend and now wished she could get out of it.

INTERVIEW LOG: PARTICIPANT J

2nd Interview: September 25, 1996, 10 a.m.

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations for the second interview included the presence of lemon slices, maple syrup, Johnson's Baby Powder, the spices of cinnamon, cloves, and nutmeg besides peppermint candy, chocolates, ginger candy. These were arranged on a covered tray on the buffet.

Ms. J. arrived on September 25, 1996 at 10 a.m. She appeared more relaxed than during the first interview, but was still reserved in her responses.

EXPERIENCE!

After being settled and served tea, Ms. J. was offered various previously identified pleasant aromatic stimulus. The participant readily identified each one, but without any enthusiastic response except for the baby talc, which stimulated pleasant baby memories of her own and her grandchildren. There were also various spices which triggered happy times of being involved in cooking activities with friends. Ms. J. was more responsive during the second interview than in the first interview, but there was still that lack of being involved in the moment. She smiled but she kept a lid on warmth.

REFLECTION!

On completing the interview, she prepared to leave immediately so as not to keep her husband waiting. At this time, thanks were extended to Ms. J. for her taking the time to come and help with the research. Later a token of thanks was forwarded to her and a promise to keep her posted on the outcome.

NOTE:

The interviews with this participant concerned me because although it followed the same format as the others, for some reason it was different. I re-evaluated the tapes,

videos and transcripts in order to discover why this was so. A personal opinion - she did not appear to be actually in the present moment, but just observing it from a safe distance.

INTERVIEW LOG: PARTICIPANT L

1st Interview: September 3, 1996

ANTICIPATION!

Prior to Ms. L.'s arrival the dining room had been prepared with video camera, audio tape deck, pen and paper for recording the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

Ms. L. the participant, arrived on September 3, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was an alert, rosy, sixty-five year old smiling lady. She appeared to be pleased to be taking part in the research project. Within a few minutes, we moved into the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, in relation to the research, and why it was important for it to be signed. The camera, tape deck and note-taking were also mentioned, as part of the ongoing collection of research data.

On being asked to recall pleasant aromatic memories from childhood, Ms. L. listened carefully and then considered the question before answering. It was as if the memories themselves impelled her to speak about the aromas of nutmeg in rice pudding, Christmas cake and raspberries. In addition, the sense of love and security present at that time, glowed in her face. On being asked to remember other times, she continued reminiscing about nice smells and happy feelings at her Grandparents' farm house. When remembering about her parents, there was a marked difference, a diminishing in the warmth in her face. Later on in the interview, she spoke with smiles and in a relaxed manner, of the smell of fresh clothes and baking. It appeared to have a special meaning to

her.

REFLECTION!

While sitting on the veranda, she again mentioned the aroma of fresh clothes just off the line. It appeared that recreating that special fragrance had a meaning all on its own to her. At this point Ms. L. was thanked for her generous cooperation during the first interview and then arrangements were made for her to return on September 10, 1996 at 10 a.m., for the next interview. She left, shortly after and drove herself home.

NOTE:

The participant was a confident senior with a very careful way of expressing her replies. I would like to have heard what she really thought of the interview procedure and questions.

INTERVIEW LOG: PARTICIPANT L

2nd Interview: September 10, 1996

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations included: raspberry tea, molasses, nutmeg, dried savory, allspice, broiled toast and butter. All these items, except tea and toast, were arranged on a covered tray on the buffet.

EXPERIENCE!

Ms. L. arrived on September 10, 1996 at 10 a.m. She appeared relaxed and pleased that the first interview had gone well and interested in proceeding with the second episode. On being offered raspberry tea, she accepted the cup and sipped at it during the whole of the interview. As each successive aroma was placed before Ms. L. she responded with smiles, words, gestures, and tumbling memories. Her reminiscing covered different stages of her life from very young, the rice pudding, to present, moving her ninety-five year confused mother into a nursing home. One aspect of her recollections was the expansion of happy memories to include mother, father and brother which had been omitted during the first interview.

REFLECTION!

Again, it was after the interview, as Ms. L. sat and relaxed on the veranda, that she continued to discuss her mother's long life and how she (her mother) would never talk about being an orphan in England and coming to Canada as a child and being put out to work. Ms. L. then remarked, it has been good to remember the few good times her mother, father and brother had together.

At this time, thanks were extended to Ms. L. for her time and gracious help during both sessions. Later a token of thanks was forwarded to her and a promise to keep her posted on the outcome.

NOTE:

Although the participant still considered her replies carefully, she appeared to be enjoying the session more. When she spoke about times with her parents as a young child, she seemed be pleased with being able to recall those special good times.

INTERVIEW LOG: PARTICIPANT M

1st Interview: August 29, 1996

ANTICIPATION!

Prior to Ms. M.'s arrival the dining room had been prepared with video camera, audio tape deck and pen/paper for recording the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

Ms. M. arrived on August 29, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was a smiling, quiet senior, who appeared to be slightly unsure of what was expected of her, but willing to go ahead. Within a few minutes, we moved inside to the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, regarding the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary. She was still uncomfortable with the interview atmosphere but seemed to show signs of relaxing.

On being asked to recall pleasant aromatic memories from childhood, Ms. M. responded with very specific and limited answers, and waited to be prompted by the next question. A distraction of a jack-hammer just outside the window did not help the interview along. Closing the window eased the racket and the session continued. Ms. M.'s replies were often general and with little emotional involvement, but as the interview progressed there appeared to be a pattern of aromatic enjoyment closely related to physical activity.

REFLECTION!

After the interview was completed she stood for a few minutes on the veranda, I

thanked her for helping with her time and thoughts. She then mentioned that she was doubtful if she had been of much help and said, "....I mean some things I'm observant of...and some things I'm not...and I wasn't particularly aware of ...aromas that had associations." Then following arrangements for her return on September 9, 1996 at 10 a.m. for the second interview, she quickly walked down the steps and drove away to complete her errands.

NOTE:

The jackhammer noise just outside the window appeared to distress her and distracted her even after the window was closed.

INTERVIEW LOG: PARTICIPANT M

2nd Interview: September 9, 1996, 10 a.m.

ANTICIPATION!

Prior to the interview the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations included baked ham with cloves, fresh cut grass, fresh sage, apple-tart and a pine bough. All these items except for the pine bough were placed on a covered tray on the buffet.

Ms. M. arrived on September 9, 1996 at 10 a.m. and was welcomed on the veranda and escorted into the interview room.

EXPERIENCE!

After being served tea and relaxing a little Ms. M. was offered various aromas which she had previously identified as pleasant. Some of these did cause her to remember the fact of the smell but without a smiling memory. What was recalled was the activity associated with the aroma, smell of apples triggered carrying bushel bags home. As the session progressed she appeared to become more relaxed and spoke more freely of related events, especially family gatherings and the tradition of celebrations.

REFLECTION!

After the interview, as she was being thanked for coming and sharing her time and thoughts, she again sounded doubtful if she had been much help. She then went on to say, "...but you can get preoccupied with events of the day at times and get overwhelmed by them." Soon after this she left and drove away to another appointment.

Later a token of appreciation was forwarded to her along with a promise to let her know the outcome of the research.

NOTE:

The participant appeared to be aware she was rushing through her days and spoke

as if it was time to slow down, while she hurried away.

INTERVIEW LOG: PARTICIPANT W

1st Interview: August 23, 1996

ANTICIPATION!

Prior to Ms. W.'s arrival the dining room had been prepared with video camera, audio tape deck and pen/paper for recording of the interview. Also, because it was hot, a fan had been turned on to augment the summer breeze. In order to create an environment of relaxation, chairs were placed facing each other around the covered dining room table and a tea tray set up to welcome the participant.

Ms. W. arrived on August 23, 1996, at 10 a.m. for her first interview, and was welcomed on the veranda of the house. She was an alert, confident and articulate eighty-five year old lady, who was living independently in her own home. She appeared to be pleased to be taking part in the research project and within a few minutes, we moved into the interview room.

EXPERIENCE!

The interview opened with fresh tea being served and a few minutes were spent explaining the purpose of the ethics form, regarding the research, and why it was important for her to sign this form. The camera, tape deck and note taking were also explained as part of the collection of research data and why they were necessary.

On being asked to recall pleasant aromatic memories from childhood, Ms. W. considered the question and then carefully expressed her answers, using descriptive words, hand gestures and body movements. (At one point, in the interview, I wondered if she had been a teacher, because of her careful articulation. But she never mentioned the possibility). As she recounted various aromatic episodes, there was no doubt, that she had lived and loved the moments she was recalling. Several times she referred to her lifelong need for security, while at the same time she gave the appearance of being completely secure within herself.

REFLECTION!

After the interview, as she sat on the veranda for a few minutes, she appeared to be completely at ease and enjoying the summer morning. She mentioned that both her sons lived out of Ottawa, but visited and took her out quite often. She seemed to be very interested in her church activities and fitness program (chair exercises).

She was then thanked for helping, by providing both her time and energy to help with the research project. After making arrangements to return on August 30, 1996 at 10 a.m., she was helped down the steps and walked toward her home a short distance away.

NOTE:

Ms. W. was a charming person, who appeared to be completely at peace with the days of her life!

INTERVIEW LOG: PARTICIPANT W

2nd Interview: August 30, 1996, 10 a.m.

ANTICIPATION!

Prior to the second interview, the dining room had been prepared as before with recording equipment and other amenities. In addition, preparations included the presence of mint tea, hot cocoa and bacon on a covered tray on the buffet.

Ms. W. arrived on August 30, 1996 at 10 a.m. and was met on the veranda. She again appeared pleased to be there, in fact there was a certain air of anticipation in her manner, before going into the dining room.

EXPERIENCE!

After settling in and on being served mint tea, Ms. W. immediately spoke of reaching down and picking a mint leaf, her recollection was so vivid, a mint leaf was expected to be seen in her fingers. Again, when she was offered hot cocoa, her reactions were instantaneous and compelling, remembering cold feet resting on a warm oven door. Later in the interview, she referred to the cocoa again and of her intention to serve hot cocoa with sugar-twin (diabetic consideration) for putting her hands around and sipping a warm bedtime drink. On being served hot bacon, she nibbled and spoke about how much she was enjoying both the memory and the reality. On reminiscing about the lovely aroma of the Balm of Gilead, she stated her intention of calling the Experimental Farm for information on its location in Ottawa, so she could smell it again. Ms. W.'s clarity and vividness of detail of events which occurred seventy and eighty years ago were remarkable. In addition, she reached out and welcomed as old friends, the flowers on the front porch, the visiting amber cat, and neighbors walking by. A lovely, unique lady who cared about all stages of life.

REFLECTION!

It was after the interview, as she sat and relaxed on the veranda, that the

conversation continued, with her expanding, with a happy smile, on memories surrounding the ones already mentioned. She offered her thanks for helping her to go back and find those good moments and bring each one to her now. She mentioned wanting to see and smell the Balm of Gilead soon.

At this time, thanks were extended to Ms. W. for her time and gracious help during the sessions. In a few minutes she decided to leave and after helping her down the steps, she walked spritely toward her own home.

Later a token of thanks was forwarded to her and a promise to keep her posted on the outcome.

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