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"Alzheimer's Disease as a Theme in Sandra Sabatini's *The One With the News*"

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"'The key thing is persistence. And creativity. Motivation. And a little luck can never hurt.'"
Dr. Dale Schenk – Neuroscientist/Alzheimer's researcher[1]

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[1] Schenk qtd. in Anderson.

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Hinweis

Diese Diplomarbeit hat nachgewiesen, dass die betreffende Kandidatin oder der betreffende Kandidat befähigt ist, wissenschaftliche Themen selbstständig sowie inhaltlich und methodisch vertretbar zu bearbeiten. Da die Korrekturen der/des Beurteilenden nicht eingetragen sind und das Gutachten nicht beiliegt, ist daher nicht erkenntlich mit welcher Note diese Arbeit abgeschlossen wurde. Das Spektrum reicht von sehr gut bis genügend. Die Habilitierten des Instituts für Anglistik und Amerikanistik bitten diesen Hinweis bei der Lektüre zu beachten.

Declaration of Authenticity

I confirm to have conceived and written this diploma thesis in English all by myself. Quotations from other authors are all clearly marked and acknowledged in the bibliographical references, either in the footnotes or within the text. Any ideas borrowed and/or passages paraphrased from the works of other authors are truthfully acknowledged and identified in the footnotes.

Signature

Abbreviations

Acetylcholine	ACh
Acetylcholinesterase	AChE
Amyloid-beta	Aβ
Amyloid precursor protein	APP
Apolipoprotein E4	APOE
Blood-brain barrier	BBB
Blood oxygen level-dependent	BOLD
Brain-derived neurotrophic factor	BDNF
Central nervous system	CNS
Cerebrospinal fluid	CSF
Cholinesterase inhibitors	ChEIs
Computed tomography	CT
Diabetes mellitus	DM
Down syndrome	DS
Epsilon 4	ε4
Fluorodeoxyglucose	[18F]FDG
Functional magnetic resonance imaging	fMRI
Homocysteine	Hcy
Hypercholesterolemia	Hcl
Hyperhomocysteinemia	HHcy
Ioflupane-CIT	[123I]FP-CIT
Magnetic resonance imaging	MRI
Mild cognitive impairment	MCI
Neurofibrillary tangles	NFTs
N-methly-D-aspartate receptor	NMDR
Phosphorylated tau	p-tau
Positron emission tomography	PET
Presenilin 1	PSEN1
Presenilin 2	PSEN2
Single photon emission computed tomography	SPECT
Soluble amyloid precursor protein	sAPP
Tc-hexamethylpropyleneamine oxime	[99m]TcHMPAO

Total tau...t-tau

Traumatic brain injury..TBI

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1 Introduction

"'Ich habe mich sozusagen selbst verloren - I have, so to speak, lost myself.'"
Auguste Deter[2]

As this statement by Auguste Deter, who was the first person diagnosed with Alzheimer's, indicates (Naue 315), the disease interferes with thinking, memory as well as behavior (Thies and Bleiler 209). To be more specific, it is a neurodegenerative disease, develops gradually over time, and leads to neuronal loss (Guttmacher and Collins 1356). Currently, no cure exists and hence Alzheimer's ultimately leads to death (Thies and Bleiler 209 and 220).

Alzheimer's is a subcategory of brain disorders grouped under the umbrella term of *dementias*. Approximately 60 to 80 percent of people suffering from *dementia* have Alzheimer's disease (Alzheimer's Association, *Dementia* 1). More information on the other types of *dementia* is provided by the National Institute of Neurological Disorders and Stroke (cf. National Institute of Neurological Disorders and Stroke).

Alois Alzheimer, a Bavarian psychiatrist and neuropathologist, first described the disease in the beginning of the 20th century, when Auguste Deter, who was then only 51 years old, became a patient of him reporting memory problems, fear of loved ones, paranoia, and jealousy of her spouse without any reason. After her death, he performed an autopsy and discovered what he termed 'plaques' and 'neurofibrillary tangles'. He significantly contributed to medical science with these findings (Goedert and Ghetti 57-58).

In 2013, about five million US citizens older than 65 years and 200.000 under 65 years suffered from Alzheimer's. One out of nine people who were over the age of 65 and approximately one-third who were over the age of 85 had this disease (Thies and Bleiler 215).

The majority of those diagnosed with Alzheimer's disease are women, namely almost two-thirds. However, this might be attributed to the fact that women commonly die at an older age compared to men. It has also been shown several times that gender is not a decisive factor for Alzheimer's or other *dementias* (Thies and Bleiler 215).

Proportionally, older African-Americans and Hispanics are at greater risk to develop Alzheimer's disease or any kind of *dementia* as opposed to older whites. To be more precise, the African-Americans' risk is approximately twice as high and the Hispanics' risk is one

[2] Deter qtd. in Naue 315.

and one-half times as high to have Alzheimer's or other *dementias* compared to whites. Although it has not been agreed on specific reasons for this clear distinction, some scholars assume that it is based on differences in the state of health and levels of education. However, an increase in the rate of diabetes mellitus and hypertension in these populations, which are predisposed to Alzheimer's disease and other *dementias,* might also be a specific factor (Thies and Bleiler 215-216).

As more and more people grow older than 65 in the United States, the annual incidences of Alzheimer's are expected to almost triple until 2050. Hence, it has been calculated that about 13.8 million people will suffer from Alzheimer's disease less than 50 years from now (Thies and Bleiler 216-217).

In the United States, Alzheimer's is said to be the sixth leading cause of death. For people who are over 65 years old, it is even the fifth leading one. However, the exact number of people who die from Alzheimer's disease annually cannot be calculated easily, as people do not necessarily die from the disease itself, but from complications resulting out of it, such as pneumonia, which are then said to be the primary cause of death (Thies and Bleiler 217-218).

It is assumed that more than half of those over 70 with Alzheimer's will not reach their 80th birthday. Conversely, only one-third of the same age who do not suffer from the disease will not reach the age of 80 (Thies and Bleiler 218).

The number of people who die from Alzheimer's disease has dramatically risen, by almost 70 percent in ten years from 2000 to 2010. To be more specific, 9.3 times more people aged between 75 and 84 and 49.9 times more people who were over 85 years old succumbed to Alzheimer's in relation to people who were between 65 and 74 years old in 2010 (Thies and Bleiler 219-220).

Alzheimer's disease affects millions of people worldwide (Prince, Prina, and Guerchet 1). However, the disease also has a strong effect on the carers of Alzheimer's patients, who are mostly family members of the sick person (Thies and Bleiler 221). Nursing someone suffering from Alzheimer's can pose a great burden to and put a tremendous strain on caregivers. For example, taking care of a sufferer of Alzheimer's can have a severe impact on one's psyche. Carers can experience a range of intense emotions. The psychological stress can also result in the development of physical health problems (Thies and Bleiler 223-225). Thus, it was only a matter of time before Alzheimer's disease and the burden of caregiving became an openly and extensively discussed subject in literature.

The aim of this thesis is to analyze how Alzheimer's disease and the burden of caregiving are portrayed in the collection of short stories *The One With the News* by Sandra Sabatini. To be more precise, this book exemplifies the experiences of suffering from this horrible disease and dealing with and caring for an affected loved one. Each short story focuses on and is told from the point of view of a different main character, i.e. family members and people living in the immediate surroundings of the same sick person, and reveals the deep impact the disease has on them. One story is even told from the perspective of the person suffering from Alzheimer's.

This thesis is divided into two main parts. In chapter 2, emphasis will be put on describing Alzheimer's, as basic knowledge and understanding of this disease is important for the later discussion of the short stories in *The One With the News.* To begin with, in section 2.1, the disease's etiology and pathology will be described followed by an outline of the risk factors and preventative measures of Alzheimer's in sections 2.2 and 2.3. In addition, their possible connection will also be taken into account in section 2.4. Sections 2.5 and 2.6 will deal with methods for diagnosing and current options for treating Alzheimer's. Then a summary of the present research in the field of Alzheimer's as well as an outlook on future treatments will be provided in section 2.7.

The second part of the paper, i.e. chapter 3, will be concerned with the analysis of the collection of short stories *The One With the News.* To begin with, information about the author will be supplied in section 3.1 followed by an introduction to the book's genre and structure in section 3.2. Afterwards, the plot and the setting of the stories will be looked at in sections 3.3 and 3.4. In section 3.5, a description of the characters will be given. The themes of the book will be discussed in section 3.6. Lastly, in section 3.7, the short stories will be analyzed with regard to the effects of Alzheimer's disease on patients as well as family members and people of the immediate environment of the affected person and the burden of caregiving.

2 Alzheimer's Disease

This chapter serves as a basis for the later analysis of the chosen book. To gain a deeper understanding of Alzheimer's, the etiology as well as pathology will be described. This is important for the discussion of the collection of short stories *The One With the News* by Sandra Sabatini, which focuses on the experiences of an Alzheimer's patient and the family members' as well as acquaintances' ways of dealing with this horrible disease. Furthermore, an outline of the risk factors and preventative measures of Alzheimer's will be presented followed by a brief discussion of their possible connection with each other. Afterwards, emphasis will be put on the methods for diagnosing the disease. The following section will deal with the current options for treating Alzheimer's. Lastly, the present research in the field of Alzheimer's will be summarized and an outlook on what the future may hold regarding the disease's treatment will be given.

2.1 Etiology and Pathology

"As the disease progresses, people with Alzheimer's will need more support from those who care for them. Eventually, they will need help with all their daily activities."[3]

Primarily, the clinical and pathological manifestations of Alzheimer's need to be differentiated. The clinical ones describe the symptoms of the disease. Senile plaques and neurofibrillary tangles as well as neuronal death and synapse loss are features of the pathological ones, which will be briefly considered below, followed by a basic outline of the symptoms. The clinical manifestations will be presented in comparison to the normal signs of aging in order to clearly highlight the differences. Then the seven stages of the disease's progression will be listed.

[3] Alzheimer's Society, *What is Alzheimer's* 2.

2.1.1 Senile Plaques and Neurofibrillary Tangles

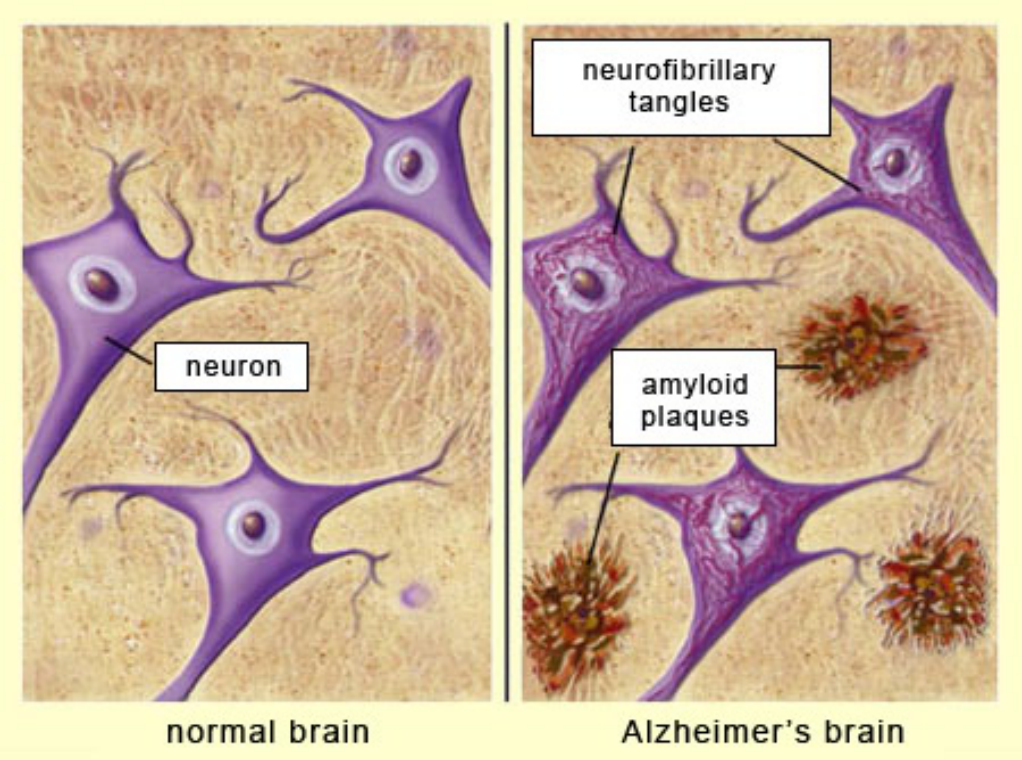

Fig. 1 Senile Plaques and Neurofibrillary Tangles (see "Senile Plaques and Neurofibrillary Tangles" in bibliography)

Senile plaques are "[s]pherical masses consisting of amyloid fibrils and neuronal processes" (Parker and Parker 269). These extracellular plaques, which are not soluble, are deposits of the peptide amyloid-beta (abbreviated as Aβ), which is processed from the amyloid precursor protein (abbreviated as APP) (Nowotny, Kwon, and Goate 2-3). It is a transmembrane protein (Amyloid Precursor Protein[4]). According to the Merriam-Webster online dictionary, a peptide is an "[o]rganic compound composed of a series of amino acids linked by peptide bonds […] between a carbon atom of one and a nitrogen atom of the next. Peptide chains longer than a few dozen amino acids are called proteins" (Peptide). It is differentiated between classical and diffuse plaques. Whereas the former include accumulations of Aβ and are mostly linked to degeneration and neuronal death, the latter are accumulations of Aβ and normally not linked to neuronal dystrophy and abnormal neurites (Nowotny, Kwon, and Goate 2-3). The Collins dictionary defines a neurite as "any projection from the body of a nerve cell (neuron), whether an axon or a dendrite" (Neurite). The reason why it is believed that plaques develop out of increased levels of Aβ is, as stated

[4] All electronic sources of which the name of the author is unknown are to be found under the respective, indicated keyword in the bibliography.

by Petra Nowotny, Jennifer Kwon, and Alison Goate, "[b]ecause soluble β-amyloid aggregates spontaneously into fibrils that are indistinguishable from those found in vivo" (3). Because of aggregation of Aβ, brain cells or nerve cells fail to communicate effectively with each other and eventually die (Thies and Bleiler 212).

Neurofibrillary tangles (abbreviated as NFTs) are "[a]bnormal structures located in various parts of the brain and composed of dense arrays of paired helical filaments" (Parker and Parker 255). These intracellular tangles are deposits of the tau protein, which is linked to microtubules and can be detected in dystrophic neurons (Nowotny, Kwon, and Goate 3). To be more precise, tau proteins normally stabilize microtubules. They are a component in the support of the structure of the cell (Buée et al. 95). Microtubules can be understood as tracks (Buée et al. 95), which support vesicles transport between the cell bodies and the axons' ends (Microtubules). When suffering from Alzheimer's disease, tau is hyperphosphorylated and hence NFTs are formed by paired-helical filaments which are not soluble. As a result of this formation, microtubules lack stability and in turn do no longer function as tracks for transporting signals (Nowotny, Kwon, and Goate 3 and Microtubules). Therefore, NFTs lead to neuronal death as well (Thies and Bleiler 212).

Senile plaques and NFTs can be primarily detected in the frontal and temporal lobes as well as the hippocampus. The further the disease progresses, the more brain regions are affected such as the parietal and occipital lobes (Nowotny, Kwon, and Goate 2).

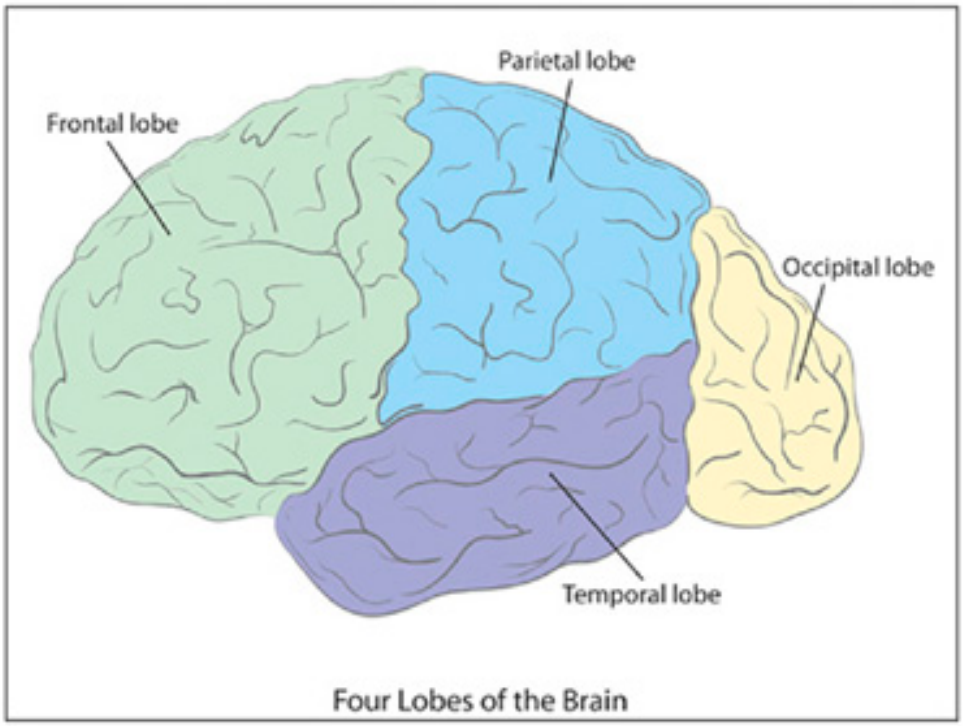

Fig. 2 Lobes (see "Lobes" in bibliography)

2.1.2 Symptoms

There are several symptoms which indicate Alzheimer's. However, it has to be borne in mind that not only our physical appearance alters when becoming older, the brain undergoes changes too and, therefore, it has to be differentiated between the normal signs of aging and those of Alzheimer's disease. Additionally, there can be other reasons for memory loss besides Alzheimer's and normal aging such as heavy drinking, malnutrition, specific infections, thyroid dysfunction, side effects of drugs, and depression. However, when the memory problems arise due to one of these reasons, it is possible to reduce the signs through medical treatment (Alzheimer's Association, *Basics* 3-4).

People suffering from Alzheimer's usually have troubles remembering newly acquired information and specific dates or events and hence repeatedly seek for answers for the same questions. As a result, dependence on the assistance of family and friends or other aids becomes soon indispensable for daily tasks. However, healthy elderly people may not be able to think of a name or date at the moment, but it usually comes to their minds later (Alzheimer's Association, *Basics* 5). Sick people may not know familiar persons or objects anymore, believe that others are planning to harm them, or even start to imagine non-existent people, objects, or events (Mace and Rabins 156-157). Although it is very rare, it can happen that Alzheimer's patients behave sexually inappropriately (Mace and Rabins 136).

Furthermore, trying to fulfill instructions or handling numbers may become more and more confusing for sick people. Having problems with organizing and performing everyday chores and finding solutions for issues can prove to be very problematic as well. By means of example, they may get lost on their way to a well-known place. Conversely, healthy elderly people may confuse numbers in their checkbooks or have to ask for help with new electronic devices (Alzheimer's Association, *Basics* 5).

Time and date can bear another challenge for Alzheimer's patients. It is possible that they become disoriented about time and place. Sick people may also encounter problems with the decoding of visual images and orientation in space leading to troubles with reading or correctly estimating the distance of an object. Healthy ones, on the other hand, may not know which day it is immediately, but can normally think of it later on. Their vision will only decrease due to cataracts (Alzheimer's Association, *Basics* 6).

In addition, people having Alzheimer's may find it difficult to listen to an interlocutor and in turn to contribute meaningfully to the talk. On top of that certain vocabulary can pose

difficulties as they may be confused with others or even fully forgotten in contrast to healthy elderly people who simply cannot remember a certain word during a conversation. Patients may also mislay items and are then incapable of remembering their previous action so that they look for them in the wrong places as opposed to non-patients who are able to do that when having lost an item. People with Alzheimer's may also arrive at the unfounded suspicion that other people in their surroundings have taken away the items on purpose (Alzheimer's Association, *Basics* 7).

Moreover, when it comes to forming opinions based on rational arguments, it can happen that Alzheimer's patients have greater difficulties. Furthermore, even when having paid great attention to their body hygiene their whole lives, people suffering from Alzheimer's may not continue their habit to the same extent anymore. Sometimes, older people form rather poor opinions, which does not mean that they are sick. Finishing work and taking part in social activities may also belong to the past due to Alzheimer's disease because either affected people are not capable of handling them anymore or they are aware of their problems and, therefore, stop spending time with other people in contrast to non-affected ones who may just be too tired after work to engage in social activities (Alzheimer's Association, *Bascis* 7-8).

The way people with Alzheimer's feel and behave may also change. Leaving their familiar surroundings can put great pressure on Alzheimer's patients, making them sad, worried, and angry (Alzheimer's Association, *Basics* 8). Interestingly, feelings may not be as easily forgotten as the reasons for their emotional state (Mace and Rabins 152). Usually, healthy elderly people are used to certain rituals and may behave unexpectedly when they are changed, which is no cause for concern (Alzheimer's Association, *Basics* 8).

People having Alzheimer's may suffer from depression. However, not all of them feel this way because they already know that they are incurably sick, some of them have other reasons as well. If untreated, it is likely that allowed or forbidden substances, such as alcohol or psychedelic drugs, start to play an important role in Alzheimer's patients' daily lives because they, in their opinion, help them to cope with this situation. It is of ultimate importance to deal with the problems, as alcohol and drugs can worsen the condition (Mace and Rabins 149-151).

2.1.3 Progression

Generally speaking, the disease's course cannot be predicted with certainty. The different stages only offer an overall insight into the progression of the disease. The symptoms vary to a large extent, as every human being is unique. However, some of the symptoms are shared and occur frequently (Alzheimer's Association, *Basics* 19). There is a connection between the clinical and the pathological manifestations of the disease, which means that the symptoms' course and the deterioration of the nerve cells are related. The neurons responsible for learning and remembering are usually affected first followed by the ones responsible for the function of different thinking skills as well as judgment and behavior (Alzheimer's Association, *Stages* 1). People diagnosed with Alzheimer's usually suffer between four and eight years from the disease. Nevertheless, it is possible that patients may stay alive for 20 years (Alzheimer's Association, *Basics* 19).

Barry Reisberg created a framework composed of seven stages in order to give an overview of the course of Alzheimer's (Alzheimer's Association, *Basics* 19).

In the **first stage**, people are said to have no impairment. They do not have troubles remembering at all (Alzheimer's Association, *Basics* 20).

People who arrive in the **second stage** have a very mild decline, which means that they might not be able to remember well-known vocabulary or the place of an item. However, neither loved ones, nor a doctor would be able to notice any changes at this point (Alzheimer's Association, *Basics* 20).

The **third stage** represents mild cognitive impairment or decline. It is possible that loved ones or doctors start recognizing problems. However, this does not mean that all people in this stage receive the diagnosis of the early form of Alzheimer's disease. Usually, sick people in this stage have troubles with names, vocabulary, work or leisure related responsibilities, new information, relocating items, and preparing as well as arranging (Alzheimer's Association, *Basics* 20).

In **stage four**, with the help of a thoroughly held interview by doctors, the diagnosis of mild Alzheimer's disease should be possible, as the cognitive decline is already moderate. Problems with remembering events that happened shortly ago, mental calculations, or recalling one's past can arise. Furthermore, patients have bigger troubles with completing more difficult chores. It can also happen that they are unhappy or angry and keep to themselves when being confronted with socially or mentally difficult circumstances (Alzheimer's Association, *Basics* 20).

As far as **stage five** is concerned, Alzheimer's patients are said to suffer from the moderate form of the disease, because the cognitive decline is moderately severe. This means that they rely on outside support to a certain extent. For example, although they may be able to manage eating or going to the bathroom by themselves, assistance may be required in deciding which clothes are appropriate for specific situations. Next to that patients may not remember where they live or what their phone number is, but they may still know important facts about themselves and people surrounding them. Easier mental calculations may lead to problems as well (Alzheimer's Association, *Basics* 21).

People who are in **stage six** have moderately severe Alzheimer's. At this point, the cognitive decline is severe. Assistance in everyday life is indispensable. For instance, sick people might not be able to put on the right clothes and use the bathroom by themselves anymore. They may lose control over their bladder and bowels. Alzheimer's patients may forget their own past, but still know what they are called. Although they may still be able to differentiate between well-known faces and strangers, they may have problems with the names of loved ones. Walking around with no destination may also become an issue. Their daily routine may be interrupted due to the confusion of day and night. The way a person behaves might also change to a large extent. By means of example, sick people may distrust others or become doubtful. Additionally, it sometimes becomes impossible for them to control certain activities such as shredding of tissues (Alzheimer's Association, *Basics* 21).

Stage seven stands for the severe stage of Alzheimer's disease, because the cognitive decline is very severe. According to Reisberg, it is the last stage. People arriving in this stage are not able to communicate with others anymore for a longer period of time. Furthermore, the power over movement is lost as well. It is possible that single vocabulary or some phrases are remembered. Eating cannot be done without assistance anymore. Smiling may belong to the past as well as sitting by oneself. Reflexes and swallowing do not work as they should anymore and muscles are difficult to bend or move (Alzheimer's Association, *Basics* 22).

2.2 Risk Factors

"Today, there are no survivors of Alzheimer's. If you do not die from it, you die with it."[5]

Although it can still only be speculated which causes are responsible for the development of Alzheimer's, some of the risk factors have been repeatedly discussed in research. Scientists have not agreed on them so far and have presented contradictory findings. Nevertheless, the most frequently mentioned factors, which are said to most likely trigger the outbreak of Alzheimer's disease, will be outlined in this section.

Generally speaking, there are controllable risk factors and uncontrollable ones. One does not have an influence on age, genetic predisposition, down syndrome, and traumatic brain injury, but one can decrease the probability of suffering from Alzheimer's through refraining from smoking as well as regulating high blood pressure, cholesterol, homocysteine, and high blood sugar. Advancing age poses the greatest threat on the onset of Alzheimer's disease (Herrup 16756). Karl Herrup stresses that "[i]n all species, age brings a progressive slowing of brain function in virtually every domain" (16756). The major impact of this risk factor becomes obvious, when taking a close look at the prevalence of Alzheimer's discussed in the introduction (see chapter 1). Mild cognitive impairment will also be included in this section, as it is said to increase the possibility of getting Alzheimer's disease. The risk factors for mild cognitive impairment and Alzheimer's disease are equally probably (Alzheimer's Association, *MCI* 1-2).

[5] Alzheimer's Association, *Factsheet.*

2.2.1 Genes

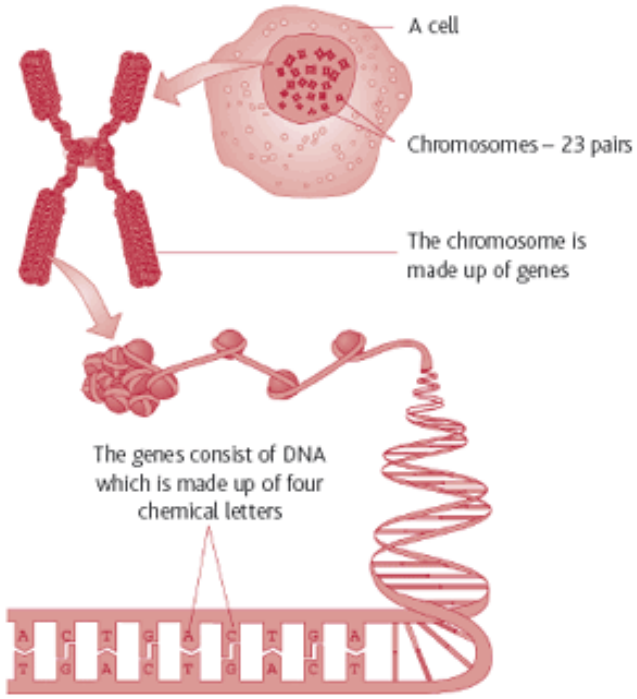

Fig. 3 Genes (see "Genes" in bibliography)

Several genes play a major role in Alzheimer's disease. The possibility for a person to get Alzheimer's is higher when the apolipoprotein E4 (abbreviated as APOE) gene is inherited. A person develops Alzheimer's when missense mutations in the amyloid beta (abbreviated as Aβ) precursor protein (abbreviated as APP), presenilin 1 (abbreviated as PSEN1), or presenilin 2 (abbreviated as PSEN2) genes are inherited as well. It can be differentiated between the familial and the sporadic forms of Alzheimer's. The familial types are passed on through the genes and are typically exhibited before the age of 65. The sporadic ones affect the majority of people and usually develop after the age of 65. It is assumed that gene mutations are involved in this context as well. Accordingly, they are either referred to as early-onset or late-onset disease (Parker and Parker 4).

2.2.1.1 Familial Form

The APP as well as the PSEN1 and PSEN2 genes, which are passed on through the genes in an autosomal dominant pattern, are responsible for the early occurrence of the familiar form

of Alzheimer's disease. In other words, when one's mother or father has a varying form of these genes, then one will most likely have it as well. One mutated gene is enough for the start of the disease (Parker and Parker 5).

The APP gene produces the amyloid precursor protein which can be found, among others, in the brain and spinal cord. Enzymes break down this protein into more parts called peptides. Some of them are spread in the extracellular space. Two peptides are the soluble amyloid precursor protein (abbreviated as sAPP) and the Aβ peptide (Parker and Parker 9). According to James and Philip Parker, it has been found out recently "that sAPP has growth-promoting properties and may play a role in the formation of nerve cells in both embryonic and adult brain tissue" (9). Further roles of these two peptides are being studied (Parker and Parker 9). Lars Bertram and Rudolph Tanzi provide further details and point out that "Aβ is generated from the amyloid precursor protein (APP) by sequential cleavage by two enzymes: β-secretase and γ-secretase" (768). This means that APP is first cleaved by the enzyme β-secretase, spreading a big part of the protein chain through separating it and then by the enzyme γ-secretase, leading to the production of amyloid plaques (Goodsell).

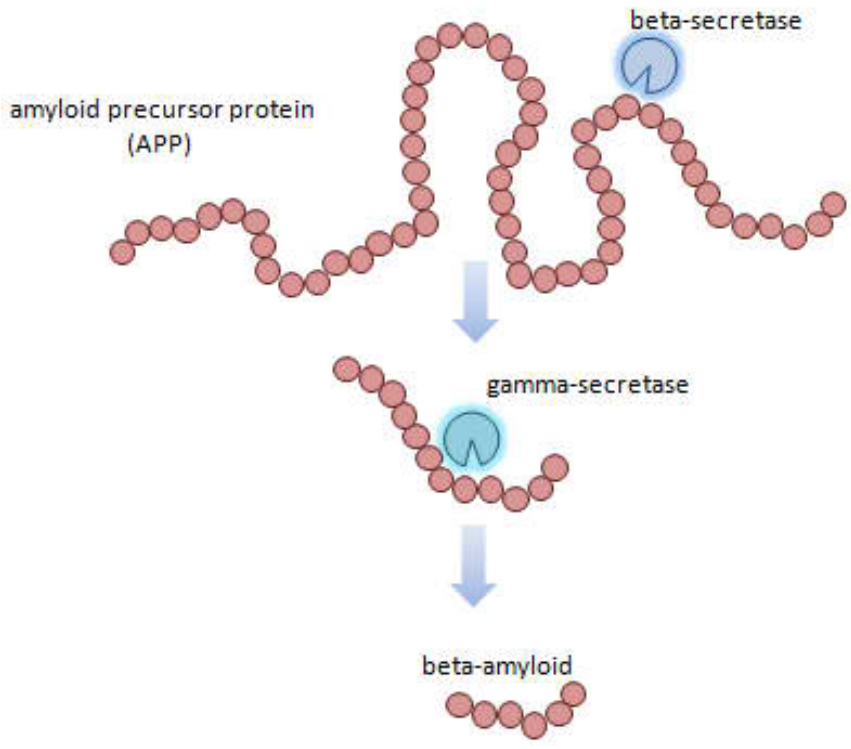

Fig. 4 Production of Amyloid Plaques (see "Amyloid Plaques" in bibliography)

One needs to understand that there are about 20 different changes in the APP gene, which trigger the outbreak of the disease. Altered APP genes account for approximately ten to 15 percent of the familial forms of Alzheimer's disease. The process of mutating a protein

building block, namely amino acid, into APP happens most frequently. Because of a mutated APP gene, either more Aβ peptide or an altered variety of it, are found in the brain. When they are spread into the extracellular space, they can become even greater in quantity and hence amyloid plaques develop (Parker and Parker 9).

There are approximately over 140 different PSEN1 and eleven PSEN2 gene changes which cause Alzheimer's. The altered forms of PSEN1 are responsible for about 70 percent and the ones of PSEN2 for about five percent of the early outbreak of the inherited form (Parker and Parker 12-14).

Whereas the PSEN1 gene produces the presenilin 1 protein, the PSEN2 gene produces the presenilin 2 protein (Parker and Parker 12-14). The PSEN1 gene appears, among others, mainly at the surface of cells and the PSEN2 one mainly in neurons in the brain (Bekris et al. 217-219). Bertram and Tanzi explain that PSEN1 and PSEN2 are "the genes that encode the proteins that lie at the catalytic centre of the γ-secretase complex" (768). To put it differently, both of them are engaged in the processing of specific proteins (Bertram and Tanzi 768). Biochemical signals are spread from the cell membrane into the nucleus where they ensure the functioning of the genes significant for the growth and maturation of cells. Another role of PSEN1 and PSEN2 is to process APP. Furthermore, it is assumed that they are included in the process of breaking down the APP into peptides. When these genes are mutated, it has an impact on the APP processing, resulting in the development of amyloid plaques through making a greater amount of Aβ peptide (Parker and Parker 12-14).

2.2.1.2 Sporadic Form

Although it is said that the APOE gene primarily poses a threat for the sporadic late-onset type of Alzheimer's disease, it has been associated with the familial form as well (Verghese, Castellano, and Holtzman 242). More information on these findings is supplied by Corder et al. as well as Pastor et al. (cf. Corder et al. and Pastor et al.). However, it has not been agreed on the genetic reasons for the late onset of familial Alzheimer's. Nevertheless, it is assumed that one's way of living and environment in addition to APOE gene changes can cause the late-onset, familial type of Alzheimer's disease (Parker and Parker 5).

Generally speaking, Philip Verghese, Joseph Castellano, and David Holtzman point out that APOE is a lipoprotein consisting of 299 amino acids, which can be primarily found in the liver and the brain (241). Parker and Parker further explain that amino acids are "[o]rganic compounds that generally contain an amino (-NH2) and a carboxyl (-COOH)

group. Twenty alpha-amino acids are the subunits which are polymerized to form proteins" (221). The APOE gene produces the apolipoprotein E, which mixes with fats/lipids. These lipoproteins transport cholesterol and other lipids in the blood in order for them to be processed (Parker and Parker 16).

One's chance of having Alzheimer's disease after the age of 65 becomes greater when one has a varying form of the APOE gene, namely the epsilon 4 (abbreviated as ε4) allele (Parker and Parker 5). Being born with the ε3 allele reduces the possibility of developing Alzheimer's. The same counts for the ε2 allele, which minimizes the chances of getting this disease even more (Verghese, Castellano, and Holtzman 242).

Although it can only be speculated which role the ε4 allele plays when it comes to the possibility of developing Alzheimer's during a person's lifetime, it is certain that it is even higher when a person has two of these alleles (Parker and Parker 16). To be more precise, the chances of suffering from Alzheimer's one day are three times higher when one possesses one copy of the APOE ε4 allele and even twelve times as high when one has two. People with the late-onset variant and one or more copies of the APOE ε4 allele suffer from Alzheimer's approximately between ten and 20 years before those without this specific copy. Additional changes in the PS1 gene are said to trigger an earlier outbreak as well (Verghese, Castellano, and Holtzman 242).

Furthermore, a greater amount of amyloid plaques have been detected in Alzheimer's patients who have the ε4 allele (Parker and Parker 16) in contrast to sick people with the ε2 allele who are said to have developed less amyloid plaques in their brains over the course of the disease (Verghese, Castellano, and Holtzman 243-244). However, scientists have not agreed on the impact of the ε4 allele on Aβ aggregation yet. Besides, Verghese, Castellano, and Holtzman are of the opinion that more attention should be paid to the ε4 allele's effect on the time when the pathological alteration starts instead of the amount of Aβ in the brain. Nevertheless, evidence suggests that the ε4 allele triggers an earlier Aβ accumulation as opposed to the ε3 and ε2 allele (Verghese, Castellano, and Holtzman 244). Extensive research has been conducted by Chiang et al., Reiman et al., and Morris et al. (cf. Chiang et al., Reiman et al., and Morris et al.). Hence, Verghese, Castellano, and Holtzman conclude that "[b]ecause APOE has a clear effect on modulation of risk of AD [Alzheimer's disease] and amyloid-β pathological changes, a key hypothesis for which there is accumulating evidence is that APOE4 increases amyloid-β aggregation, impairs clearance relative to other APOE isoforms, or both" (244). However, it does neither mean that every person having

Alzheimer's inherited this altered gene, nor that every person with this variant will ever have it (Parker and Parker 16).

2.2.2 Down Syndrome

People who suffer from Down syndrome (abbreviated as DS), also referred to as trisomy 21, have a genetic birth defect. The majority of people having DS have an additional copy of chromosome 21 as opposed to healthy ones who only have two. It is assumed that this genetic disorder evolves out of abnormal separation of cells during the formation of eggs and sperms (Alzheimer's Association, *DS* 1). To be more specific, the oocytes in meiosis I are said to be primarily responsible for the failure during the chromosome separation process. It is said that the older a woman is when conceiving, the greater the possibility for having a child with DS becomes (Sherman et al. 223). Julia Moncaster et al. emphasize that "Down syndrome [...] is the leading genetic cause of intellectual disability and the most common chromosomal disorder compatible with human survival" (1). Approximately 220.000 babies are born with this disease annually worldwide (Moncaster et al. 1).

People diagnosed with DS most likely have some degree of intellectual and physical disability ranging from learning, communication, and memory difficulties to heart diseases, muscles weaknesses, and hearing and seeing issues. However, people are affected by this disease in different ways (Alzheimer's Association, *DS* 1). More detailed information on DS symptoms is provided by Bull (cf. Bull).

DS patients are also at a higher risk of getting Alzheimer's one day. Post-mortem investigations have revealed a great amount of plaques and tangles in most of the sick people's brains at the age of 40. As afore-mentioned, the APP gene is said to trigger the outbreak of Alzheimer's disease (Alzheimer's Association, *DS* 1-2). As far as DS in connection with Alzheimer's is now concerned, scientists believe that "AD [Alzheimer's disease] is […] caused by the triplication and overexpression of the gene for APP, located on chromosome 21 and leading to the accumulation of cerebral β-amyloid" (Coppus et al. 1988). However, further research in this area is needed as this assumption still raises questions which have not been completely resolved yet (Coppus et al. 1993).

The probability of developing Alzheimer's disease becomes greater, the older people with DS get. Two thirds of those with DS and over 65 years old suffer from Alzheimer's. Generally speaking, as DS patients die approximately between 55 and 60, they belong to the at-risk group for getting the early-onset form of Alzheimer's disease. Nevertheless, some

people with DS never get this disease during their lifetime, although they show amyloid and tau depositions (Alzheimer's Association, *DS* 2-3).

2.2.3 Traumatic Brain Injury

Another risk factor for the possible development of Alzheimer's disease is traumatic brain injury (abbreviated as TBI). TBI is a condition in which the brain is injured by an outside force and hence does not process normally anymore (Alzheimer's Association, *TBI* 1). More than 10 million people are hospitalized or even die as a result of suffering from TBI every year (Langlois, Rutland-Brown, and Wald 375).

Generally speaking, it is differentiated between mild, moderate, and severe TBI. This distinction is drawn according to several factors, namely the person's consciousness/unconsciousness as well as the duration and seriousness of this condition. TBI cannot only lead to severe temporary or lasting problems with vision, hearing, coordination, speech, learning, memory, etc., but repeated mild, onetime moderate and onetime severe TBI can also result in an increased probability of having Alzheimer's in later life (Alzheimer's Association, *TBI* 1-4). As a key study indicates, the chance of developing Alzheimer's disease is 2.3 times higher for people suffering from moderate TBI and 4.5 times as high for people suffering from the severe form (Langlois, Rutland-Brown, and Wald 376).

It has been discovered that Aβ increases over time in people with TBI. The tau levels are higher than normally as well (Sivanandam and Thakur 1377-1379). Thamil Mani Sivanandam and Mahendra Kumar Thakur offer an explanation for the occurrence of these events and point out that "[t]he accumulation of APP and its processing enzymes in these focal injuries result in increased APP processing and Aβ generation [...]. These together with other factors associated with brain injury, trigger a cascade of events that might increase tau phosphorylation and NFT formation" (1377). On top of that it has been indicated by, for example, Mayeux et al. (cf. Mayeux et al., *Traumatic Head Injury*) that people with TBI having the APOE ε4 allele may develop Alzheimer's to an even fairly larger degree (Alzheimer's Association, *TBI* 4).

More research in this field of study is needed in order to learn more about the relationship between Alzheimer's and TBI (Sivanandam and Thakur 1377-1379). However, a very recent investigation dealing with the issue of tau and Aβ in TBI has been published by Johnson, Stewart, and Smith (cf. Johnson, Steward, and Smith).

2.2.4 Mild Cognitive Impairment

Mild cognitive impairment (abbreviated as MCI) can also become a risk factor when it comes to developing Alzheimer's disease. Ronald Petersen points out that "[m]ild cognitive impairment represents an intermediate state of cognitive function between the changes seen in aging and those fulfilling the criteria for dementia and often Alzheimer's disease" (2227). To put it differently, MCI is a condition in between the usual age-related cognitive decline and *dementia* (Petersen 2227).

Generally speaking, it must be differentiated between amnestic MCI and non-amnestic MCI. Whereas the former refers to memory changes and does not apply to the criteria for *dementia*, the latter describes changes regarding visual and spatial awareness, language usage, and attention. It is said that MCI patients and the people living in their immediate surroundings usually recognize their growing inability to remember. More people who are diagnosed with MCI suffer from the amnestic form. Amnestic MCI is the greatest risk factor for developing Alzheimer's disease as opposed to the non-amnestic form, which might lead to other *dementias* (Petersen 2227).

Approximately ten to 20 per cent of people who are over 65 years old suffer from MCI. Previously conducted studies have revealed that the chance of getting Alzheimer's when having MCI becomes significantly higher (Petersen 2227-2228). Petersen stresses that it is likely for a person to fully recover when being diagnosed with MCI (2228). However, the estimated percentage of 25 to 30 has been challenged by more recent findings from Manly et al. (cf. Manly et al.), suggesting smaller rates (Petersen 2228). It needs to be added that a renewed decline is possible even after full recovery at a later point (Petersen 2228).

The reasons for the outbreak of MCI still remain slightly unclear. It is assumed that many people diagnosed with MCI already suffer from the very mild form of Alzheimer's. In other words, MCI can represent the beginning stage of Alzheimer's. However, the probability for developing MCI rises depending on age, genealogy, and situations which increase the possibility for developing cardiovascular diseases (Alzheimer's Association, *MCI* 2). In order to facilitate the diagnosis of MCI because of Alzheimer's disease, the National Institute on Aging in cooperation with the Alzheimer's Association asked a group of scientists to create criteria for this concern (cf. Albert et al.).

2.2.5 Smoking

One of the most controversial risk factors is smoking. Whereas former cross-sectional studies showed that there were fewer Alzheimer's patients who smoked compared to non-smoking ones, analytical studies have revealed that the probability of developing Alzheimer's disease becomes greater when smoking, especially when one does not possess the APOE ε4 allele (Povova et al. 109). It is assumed by Jana Povova et al. that the initial results were "probably due to survivor bias since the proportion of smokers among the prevalent cases was smaller" (109). In other words, there were fewer smokers among Alzheimer's patients (Povova et al. 109). Fratiglioni and Wang as well as Tyas et al. provide a deeper insight into this issue (cf. Fratiglioni and Wang and Tyas et al.).

The studies focusing on former smokers and non-smokers in connection with the outbreak of Alzheimer's have displayed contradictory results as well. While some of them indicate that the chance of becoming an Alzheimer's patient one day is the same for former smokers, others have detected the opposite (Dickstein et al. 91). More information on these findings is supplied by Merchant et al. and Ott et al. (cf. Merchant et al. and Ott et al.).

As far as nicotine and its impact on Alzheimer's disease is concerned, several different propositions have been made. For example, it has been proven that smoking leads to atherosclerosis and thrombosis, which in turn raise the possibility of suffering from Alzheimer's one day (Dickstein et al. 91), as has been shown, among others, by Shinton and Beevers as well as Cruickshank et al. (cf. Shinton and Beevers and Cruickshank et al.). However, as pointed out by Dara Dickstein et al., some scientists have discovered that nicotine controls "the neurotoxic effects of Aβ, can exert potent neuroprotective effects, and may confer resistance to AD [Alzheimer's disease]" (91). To put it differently, nicotine increases and activates nicotinic acetylcholine receptors (Dickstein et al. 91), which, as David Colquhoun et al. emphasize, "are responsible for transmission of nerve impulses from motor nerves to muscle fibres […] and for synaptic transmission in autonomic ganglia" (3). The nicotine acetylcholine receptors can be found in the brain as well. It is believed that they cause the need to use nicotine (Colquhoun et al. 3). This process prevents Aβ of being toxic to cells. Alzheimer's patients have fewer acetylcholine nicotinic receptors (Dickstein et al. 91). Nordberg, Alafuzoff, and Winblad as well as Moon et al. have conducted studies in this context (cf. Nordberg, Alafuzoff, and Winblad and Moon et al.). On the one hand, transgenic mice studies have demonstrated that a decrease of Aβ and a leap in cognition was achieved by the chronic use of nicotine. On the other hand, other mice studies have not

revealed any change (Dickstein et al. 92). Nordberg et al., Shim et al., Oddo et al., and Sabbagh et al. have carried out these investigations (cf. Nordberg et al., Shim et al., Oddo et al., and Sabbagh et al.).

2.2.6 Hypertension

Hypertension is considered to be another factor increasing the risk of developing Alzheimer's disease. However, scientists have not agreed on the extent of its influence either (Povova et al. 109-110). Generally speaking, Parker and Parker explain that hypertension is "[p]ersistenly high arterial blood pressure. Currently accepted threshold levels are 140 mm HG systolic and 90 mm diastolic pressure" (245).

Some observational studies have demonstrated that one's chances of getting Alzheimer's later in life are greater when one ignores the symptoms of hypertension and does not receive adequate treatment (Povova et al. 109). It needs to be stressed that especially high blood pressure in midlife involves a great risk (Dickstein et al. 87). Kivipelto et al. and Launer et al. have extensively studied this relationship (cf. Kivipelto et al. and Launer et al.).

However, analytical studies have displayed different results as far as the link between high blood pressure and Alzheimer's disease is concerned. The outcomes of short follow-up studies focusing on hypertension in connection with Alzheimer's have either revealed a link going in the opposite direction or no link at all in contrast to longer follow-ups. This could be due to the factors that Alzheimer's is a disease which exists long before it develops and its symptoms are noticeable and that the blood pressure can lower before the clinical manifestation of hypertension (Povova et al 110). In-depth research has been carried out by Skoog et al. as well as Petitti et al. (cf. Skoog et al. and Petitti et al.).

Conversely, longer follow-up results of analytical studies have indicated that blood pressure lower than normal can also be a contributing factor to Alzheimer's disease (Povova et al. 110). Ruitenberg et al. have conducted an investigation focusing on the relationship between low blood pressure and Alzheimer's (cf. Ruitenberg et al.). Furthermore, scientists have discovered that hypertension and the Alzheimer's disease's brain pathology are connected (Dickstein et al. 87).

As far as the impact of high blood pressure on the possible development of Alzheimer's goes, some hypotheses have been put forward observed in recent years (Dickstein et al. 88). The first assumption is that vascular changes occur because of high blood pressure resulting

in various infarcts and "[d]ecreased vascular density" (Leukoaraiosis) and in turn in decreased cognitive function (Dickstein et al. 88). Secondly, it has been highlighted that high blood pressure has an influence on cardiovascular diseases, which can be a cause for Alzheimer's disease as well. As a third proposition, it is believed that more Aβ can be found when suffering from high blood pressure (Dickstein et al. 88). Snowdon et al. and Petrovitch et al. offer deeper insights into these hypotheses (cf. Snowdown et al. and Petrovitch et al.).

2.2.7 Hypercholesterolemia

Hypercholesterolemia (abbreviated as Hcl), which bears another risk for developing Alzheimer's disease, is defined by Parker and Parker as "[a]bnormally high levels of cholesterol in the blood" (245). According to the Merriam-Webster online dictionary, cholesterol is "a steroid alcohol [...] that is present in animal cells and body fluids, regulates membrane fluidity, and functions as a precursor molecule in various metabolic pathways" (Cholesterol).

Middle-aged people, suffering from a total serum cholesterol level above average, increase their risk of becoming Alzheimer's patients one day (Povova et al. 110). Interestingly, it has been indicated that there is a connection between people without an APOE ε4 allele and with a high total cholesterol level and Alzheimer's (Dickstein et al. 89). In this context, extensive research has been conducted by Evans et al. (cf. Evans et al.).

However, a decreased cholesterol level in late middle-aged people might be the result of ongoing progression of disease and an indication for an upcoming Alzheimer's disease's outbreak (Povova et al. 110). Whitmer et al. have thoroughly dealt with these assumptions (cf. Whitmer et al., *Cardiovascular Risk Factors*). Conversely, the results of another study investigating the link between decreased cholesterol and development of Alzheimer's have suggested the opposite (Dickstein et al. 89). More detailed information can be found in Romas et al.'s study (cf. Romas et al.).

It has been detected that there is a change of the APP gene through cellular cholesterol. Nevertheless, scientists have still not fully understood how this process works (Dickstein et al. 90). Simons et al. as well as Guardia-Laguarta et al. have extensively studied this process (cf. Simons et al. and Guardia-Laguarta et al.).

2.2.8 Hyperhomocysteinemia

Hyperhomocysteinemia (abbreviated as HHcy) is explained by Parker and Parker as "[a]n inborn error of methionine metabolism which produces an excess of homocysteine (Hcy) in the blood" (245). To be more precise, homocysteine (abbreviated as Hcy) is, as the Merriam-Webster online dictionary defines, "an amino acid […] that is produced in animal metabolism by the demethylation of methionine and forms a complex with serine that breaks up to produce cysteine and homoserine" (Homocysteine). In other words, through the chemical reaction of removing a methyl group from methionine, which is another amino acid, Hcy are created (Homocysteine, Demethylation, and Methionine).

Elevated Hcy levels lead to the development of vascular lesions, which in turn lower the threshold for noticing the symptoms of Alzheimer's disease. This process serves as one reason for the connection of Hcy and the increased chance of suffering from Alzheimer's later in life (Van Dam and Van Gool 425). Wolfgang Herrmann and Rima Obeid point out that "HHcy is a surrogate marker for B vitamin deficiency (folate, B12, B6) and a neurotoxic agent" (435). However, they add that the reduction of Hcy levels can be simply achieved through the intake of vitamin B (Herrmann and Obeid 438).

2.2.9 Diabetes Mellitus

Diabetes Mellitus (abbreviated as DM) is another risk factor for Alzheimer's disease that scientists do not share consistent results about.

According to Parker and Parker, DM is "[a] heterogeneous group of disorders that share glucose intolerance in common" (235). To be more precise, the following definition is provided by the Merriam-Webster online dictionary: DM is "a variable disorder of carbohydrate metabolism caused by a combination of hereditary and environmental factors" (Diabetes Mellitus). Generally speaking, it is differentiated between type 1 and type 2 DM. Dickstein et al. further explain that "[t]ype 1 DM is characterized by a deficit in the production of insulin by the pancreatic β cells. Type 2 DM is characterized by resistance to the effects of insulin" (90). Whereas it has been indicated that people with type 1 DM suffer from problems with cognition and mental function as they do not work normally anymore, it has been proven that the cognition of people with type 2 DM becomes worse (Dickstein et al. 90).

When a person has had DM for a long time, his/her chances of getting Alzheimer's disease in later life are higher. The same counts for middle-aged people who have DM (Povova et al. 110). In this context, more detailed information is supplied by Roberts et al. (cf. Roberts et al.). As far as old persons are concerned, borderline DM raises the possibility of getting Alzheimer's disease later on as well (Povova et al. 110). Xu et al. offer a deeper insight into this connection (cf. Xu et al.). Hypertension and dyslipidaemia seem to play a crucial role too (Povova et al. 110), as has been found out by Korf et al. and Rönnemaa et al. (cf. Korf et al. and Rönnemaa et al.), who have specifically dealt with type 2 DM.

Taking a close look at studies focusing on the relation between type 2 DM and Alzheimer's disease, it has been detected that quite a number of people suffering from Alzheimer's disease also suffer from type 2 DM (Dickstein et al. 90). Detailed investigations on this connection have been made by Janson et al. (cf. Janson et al.). Next to that prospective and cross-sectional analyses have shown that type 2 DM may trigger the outbreak of Alzheimer's disease at a faster rate (Dickstein et al. 90). Pasquier et al.'s study provides a deeper insight into this assumption (cf. Pasquier et al.).

Three different processes are said to be responsible for the relationship between DM and Alzheimer's disease (Dickstein et al. 90). First of all, the probability of developing Alzheimer's disease is greater for people with DM resulting out of ischemic cerebrovascular disease (Dickstein et al. 90), which "is when a blood vessel becomes blocked, usually from a clot formed from fat and cholesterol" (Ischemic Cerebrovascular Disease). To be more specific, type 2 DM can trigger reduced insulin sensitivity, high body mass index, and elevated blood pressure and in turn might result in cerebrovascular disease (Dickstein et al. 90). Kalmijn et al. have conducted extensive studies in this context (cf. Kalmijn et al.). Secondly, high blood sugar is said to be harmful to neurons (Dickstein et al. 90). Dickstein et al. point out that it can "lead to functional or cellular brain deficits through oxidative stress and the accumulation of glycation end products" (90). Whereas oxidative stress is "physiological stress on the body that is caused by the cumulative damage done by free radicals inadequately neutralized by antioxidants and that is held to be associated with aging" (Oxidative Stress), glycation end products "are sugar derived substances formed by a nonenzymatic reaction between reducing sugars and free amino groups of proteins, nucleic acids, and lipids" (Dickstein et al. 90). As people suffering from DM have high levels of glucose, more glycation end products are created (Dickstein et al. 90). More detailed information is given by Brownlee (cf. Brownlee). Thirdly, insulin resistance increases the probability of getting Alzheimer's disease as well (Dickstein et al. 91), since insulin has an

effect on the blood vessels (Vasoactive) and vascular disease is said to be responsible for this relationship to some degree (Dickstein et al. 91). In addition, it is assumed that insulin affects the brain (Dickstein et al. 91). Insulin receptors cannot be fully activated in people having Alzheimer's disease, which, according to Dickstein et al., leads to the assumption "that AD [Alzheimer's disease] could in fact be considered an insulin-resistant brain state" (91). Insulin seems to have an effect on the metabolic process as well as the clearance of Aβ (Dickstein et al. 91). Studies dealing with these propositions have been carried out by Luchsinger et al., Ling et al., and Carro et al. (cf. Luchsinger et al., Ling et al., and Carro et al.).

2.3 Preventative Measures

"Alzheimer's disease is not just memory loss – Alzheimer's kills." [6]

Several preventative measures can be taken to reduce the risk of developing Alzheimer's disease one day, even if the scientists' opinions and research results differ in this context as well. The following part of this thesis will primarily focus on the role of nutrition, physical exercise, education, and social life as regards their impact on Alzheimer's disease.

2.3.1 Nutrition

Nutrition is one of the key factors in reducing the risk of developing Alzheimer's disease later in life. Some studies have shown that antioxidants like vitamins E and C tend to lower one's chances of getting Alzheimer's one day. Others have revealed that fish, fruits, and vegetables rich in vitamin E and C have a positive influence on one's health (Povova et al. 110). Studies dealing with these relationships have been conducted by Zandi et al., Barberger-Gateau et al., and Scarmeas et al. (cf. Zandi et al., Barberger-Gateau et al., and Scarmeas et al.). However, other scientists have come up with differing results (Povova et al. 110). In this context, more detailed information is provided by Gray et al. (cf. Gray et al.). Eating food which contains saturated fats and food high in cholesterol have a negative effect (Povova et al. 110), as has been investigated by Laitinen et al. (cf. Laitinen et al.).

In order to stress the importance of a healthy diet, the influence of obesity on the

[6] Alzheimer's Assocation, *Factsheet.*

possible onset of Alzheimer's disease will be briefly discussed. The chances of developing Alzheimer's disease are greater for middle-aged people who have a high body mass index or suffer from central obesity (Povova et al. 109). The Merriam-Webster online dictionary refers to obesity as "a condition that is characterized by excessive accumulation and storage of fat in the body and that in an adult is typically indicated by a body mass index of 30 or greater" (Obesity). Through calculating one's body mass index, one learns about one's body fat based on one's weight and height (Body Mass Index). In this context, insightful research has been carried out by Whitmer et al. (cf. Whitmer, *Obesity* et al.). Paradoxically, when the body mass index of old people becomes considerably less, the probability of getting Alzheimer's disease one day is raised to an even greater extent (Povova et al. 109). Nourhashemi et al. have extensively studied this issue (cf. Nourhashemi et al.).

2.3.2 Physical Exercise

Physical exercise also seems to play a vital role in decreasing one's chances of developing Alzheimer's disease later in life. Several study results have suggested that physical exercises like walking, hiking, and swimming on a regular basis reduce the risk of becoming an Alzheimer's patient one day (Kramer and Erickson 342-343). For instance, the investigations carried out by Larson et al. and Abbott et al. offer a deeper insight into this correlation (cf. Larson et al. and Abbott et al.). Nevertheless, some scientists have come up with results showing that being physically active cannot clearly be linked to a decreased risk of suffering from Alzheimer's one day (Kramer and Erickson 343). Lytle et al. and Almeida et al. have conducted studies regarding this assumption (cf. Lytle et al. and Almeida et al.). It has been discovered that physical exercise makes a huge difference for people who possess the APOE ε4 allele, as those exercising for a longer amount of time per day have a considerably smaller chance of getting Alzheimer's disease later in life, as has been found out by Schuit et al. (cf. Schuit et al.). Nevertheless, different research results regarding the APOE ε4 allele have been proposed as well. More detailed information is supplied by Podewils et al. (cf. Podewils et al.). It has also been shown that exercise increases synaptic connectivity and brain-derived neurotrophic factors (abbreviated as BDNF) both of which might be responsible for a reduced risk in contracting Alzheimer's disease (cf. Ahlskog et al., Cotman, Berchtold, and Christie, and Hillman, Erikson, and Kramer).

2.3.3 Education

Education is also said to have an impact on the outbreak of contracting Alzheimer's disease. Higher educated people have a reduced probability of developing Alzheimer's one day (Povova et al. 110). Qiu et al. and Ngandu et al. have thoroughly dealt with this link (cf. Qiu et al. and Ngandu et al.). Generally speaking, there is a strong connection between education and socio-economic status. However, education seems to influence the possible development of Alzheimer's in later life (Povova et al. 110), as has been demonstrated by Karp et al. (cf. Karp et al.). Since education has a positive influence on reducing the outbreak of Alzheimer's, staying mentally active is important (Barnes and Yaffe 825), which has also been found out by Stern (cf. Stern). However, it is not known whether this is simply because more education means that one makes use of alternative networks or strategies referred to as cognitive reserve, or alternatively, that one's brain literally is protected due to more synapses and healthy neurons, referred to as brain reserve (Michelon).

2.3.4 Social Life

Maintainig social interactions, personal relationships as well as participation in the community positively affect cognition and reduces the risk of Alzheimer's. Middle-aged people having fewer social interactions and personal relationships and old-aged people only having some, are said to double their chances of suffering from Alzheimer's disease one day. The more often old-aged people connect with others and the more they enjoy the encounters, the smaller the probability of getting Alzheimer's disease later on. People who are fearful, worried, and primarily paying attention to their own mental life, have an increased chance of getting Alzheimer's disease (Povova et al. 110-111). Fratiglioni, Paillard-Borg, and Winblad, Wang et al., and Saczynski et al. provide a deeper insight into these relationships (cf. Fratiglioni, Paillard-Borg, and Winblad, Wang et al., *Late-Life Engagement* and *Personality and Lifestyle*, and Saczynski et al.).

2.4 Connection Between Risk Factors and Preventative Measures

"[Alzheimer's disease] is the most common type of dementia."[7]

Scientists have diverse views on the factors increasing the risk of Alzheimer's and they do not agree on the preventative measures.

However, it can be clearly seen that some of the potential risks and causes of the disease are intermingled to a certain extent. To be more specific, smoking, hypertension, hypercholesterolemia, diabetes mellitus, and obesity raise one's possibility of getting cardiovascular disease, which in turn can trigger the onset of Alzheimer's. However, one's risks are higher, if one has at least three of these risk factors, which is then referred to as metabolic syndrome (Thies and Bleiler 213).

It is assumed that there is a strong correlation between a healthy brain, a healthy heart and blood vessels and it is also known that a large number of the factors increasing the probability of getting cardiovascular disease can be positively influenced and hence mitigated. All the preventative measures which can be undertaken to lower the chances of having cardiovascular disease later on may weaken the probability of suffering from Alzheimer's later in life as well. In this context, attention is primarily focused on physical exercise and nutrition (Thies and Bleiler 213-214).

Summing up, it seems safe to argue that maintaining a healthy lifestyle is of great importance in order to decrease one's risk of developing Alzheimer's disease.

2.5 Diagnosis

"'If I had to take a Mini-Mental test, the test we give Alzheimer's patients, I'd never score 100 because I never know what day it is.'"
Dr. Dale Schenk – Neuroscientist/Alzheimer's researcher[8]

Primary care doctors usually find out if a person suffers from Alzheimer's disease after an examination. The doctor does not only get hold of the medical issues the patient has experienced, but also of the ones from the other family members. However, not only the physical issues are taken into account. The psychiatric ones are considered as well as the

[7] Thies and Bleiler 209.
[8] Schenk qtd. in Anderson.

differences in the patient's way of behaving and mental processing. Information is also required from people living in the immediate surroundings. On top of that the cognition and the physical and neurological function are evaluated. The doctor might also want the patient to take, for example, a magnetic resonance imaging, because it might show differences in the function of the brain, like a tumor, which will be thoroughly discussed in section 2.5.1.1 (Thies and Bleiler 211). However, one can only be certain if a patient has suffered from Alzheimer's disease during lifetime, when the brain is examined histopathologically (Johnson, *Brain Imaging* et al. 2).

The National Institute on Aging together with the Alzheimer's Association came up with a suggestion concerning the diagnosis of Alzheimer's disease and presented new criteria and guidelines. Pathologists were provided with new guidelines as well in order to support their work. To be more precise, guidelines were developed to make the description and categorization of brain differences resulting out of *dementias* easier. Importantly, one has to bear in mind that all the new criteria and guidelines are only suggestions and hence cannot be followed by a doctor until more detailed studies have been conducted (Thies and Bleiler 211). For a detailed outline of the propositions see McKhann et al. and Hyman et al. (cf. McKhann et al. and Hyman et al.).

The basic differences between the old criteria and guidelines for the diagnosis of Alzheimer's and the new ones are that the preclinical manifestations are also considered and biomarker tests are carried out (Thies and Bleiler 211).

The redefined stages of Alzheimer's disease are **preclinical Alzheimer's, MCI due to Alzheimer's, and *dementia* due to Alzheimer's**. Generally speaking, it is assumed that Alzheimer's disease precedes the clinical manifestations. Scientists suggest that it is possible for new technologies to detect brain differences before actual symptoms arise (Thies and Bleiler 211).

Since it is believed that the brain starts to become different at least 20 years before any clinical manifestations are noticeable, in the **first stage,** referred to as preclinical one, differences in the brain, cerebrospinal fluid (abbreviated as CSF) as well as blood are said to be identifiable, although clinical manifestations have not begun to appear at this point. However, as afore-mentioned, detailed studies on biomarker tests are still necessary so that physicians can be provided with diagnostic criteria in order to give a diagnosis of preclinical Alzheimer's (Thies and Bleiler 11).

As a fair amount of people suffering from MCI progress to, for example, Alzheimer's, it is assumed by many scientists that MCI represents the early stage of Alzheimer's disease.

With the help of biomarker tests, people having MCI could find out if they are likely to suffer from Alzheimer's disease or other *dementias* later in life. When the differences in the brain, CSF as well as blood occur because of the pathophysiology connected with Alzheimer's, it is referred to as the **second stage,** namely MCI due to Alzheimer's disease, in the proposed list of new criteria and guidelines (Thies and Bleiler 212).

People in the **third stage** are said to suffer from *dementia* due to Alzheimer's and hence have the typical clinical manifestations outlined in section 2.1.2 (Thies and Bleiler 212).

The currently applied treatments will be discussed below in section 2.6, however, it needs to be stressed that treatments in the future for Alzheimer's, reducing the speed of the disease's course or even fully preventing it from spreading and maintaining the function of the brain, also referred to as disease-modifying treatment, should start during the preclinical and MCI stages. To be more precise, scientists think that treating Alzheimer's during these stages will offer the best results and hence lead to the best outcome. Therefore, biomarker tests indicating who is in the preclinical or MCI stage will be completely necessary so that sick people will get disease-modifying treatment. Additionally, they will also be needed in order to check if a change has been achieved through the treatment, or not. Nevertheless, more detailed studies still have to be conducted so that biomarker tests can be used most efficiently (Thies and Bleiler 212).

In this section, a presentation of the biomarkers most discussed will be provided.

2.5.1 Biomarkers

According to the Merriam-Webster online dictionary a biomarker is "a distinctive biological or biologically derived indicator (as a biochemical metabolite in the body) of a process, event, or condition (as aging, disease, or exposure to a toxic substance)" (Biomarker). Through the usage of a biomarker test, it is shown whether or not a person suffers from a disease or if a person has an increased chance of getting it (Biomarker). Simon Lovestone also points out that "[t]oday, we do not have any biomarkers widely accepted either as diagnostic markers or as progression markers" (Lovestone). Nevertheless, in-depth research is currently conducted in this context. Attention is paid to brain imaging, CSF, and blood (Lovestone).

Taking neuroimaging into account (thoroughly described in section 2.5.1.1), computed tomography was applied at first, followed by magnetic resonance imaging in order to be sure that no other cause for the decline in cognitive capacity, possibly treatable, or form of

dementia was present (Johnson et al., *Brain Imaging* 1-2). Nowadays, as Keith Johnson et al. stresses "its [imaging] position in diagnosis also includes providing positive support for a clinical diagnosis of AD [Alzheimer's disease] in symptomatic individuals by identifying characteristic patterns (signatures) of structural and functional cerebral alterations" (*Brain Imaging* 2).

As far as biomarkers in the blood and CSF are concerned (see also section 2.5.1.2) in the new criteria and guidelines, briefly outlined in section 2.5, two biomarker groups are recognized, namely the one indicating the Aβ accumulation level and the one detecting neurodegeneration. In other words, Aβ as well as tau levels in the CSF and blood are being tested (Thies and Bleiler 211-212).

First of all, the brain imaging techniques will be presented followed by a description of biomarkers investigated in the blood and CSF.

2.5.1.1 Brain Imaging

Generally speaking, it is differentiated between structural imaging, including computed tomography (abbreviated as CT) and magnetic resonance imaging (abbreviated as MRI), and functional/molecular imaging, including functional magnetic resonance imaging (abbreviated as fMRI), positron emission tomography (abbreviated as PET), and single photon emission computed tomography (abbreviated as SPECT).

Structural imaging includes CT and MRI. According to the Merriam-Webster online dictionary, **CT** is "radiography in which a three-dimensional image of a body structure is constructed by computer from a series of plane cross-sectional images made along an axis" (CT) and **MRI** is "a noninvasive diagnostic technique that produces computerized images of internal body tissues and is based on nuclear magnetic resonance of atoms within the body induced by the application of radio waves" (MRI).

CT imaging primarily reveals the atrophy and volume of the hippocampus (Small 1235). With the help of MRI, the course of Alzheimer's disease, running from the entorhinal cortex, located in the medial temporal lobe, and hippocampus to the association cortices, might be detected in vivo. It has been revealed through investigations that the measurements of hippocampal volumes with MRI correspond to the results received postmortem (Scheltens 193). Philip Scheltens emphasizes that "[i]n a meta-analysis of studies using visual and linear measurements of medial temporal lobe atrophy (MTA) on MRI, the overall sensitivity and specificity for detection of AD [Alzheimer's disease] compared with controls was

estimated to be 85% and 88%, respectively" (193). Scheltens himself in cooperation with colleagues has conducted this research (cf. Scheltens et al.). Furthermore, he adds that simple visual rating scales for roughly calculating hippocampal atrophy have shown to be helpful in clinical practice (Scheltens 193). Figure five below illustrates medial temporal lobe atrophy in contrast to a healthy brain. However, according to Scheltens, the whole brain should be considered and looked at carefully in clinical practice because unusual types of brain atrophy have been discovered as well (Scheltens 193-194). For example, it has been found out that patients suffering from an early form of Alzheimer's disease can show prominent posterior atrophy (Scheltens 193-194), as is also highlighted in figure five:

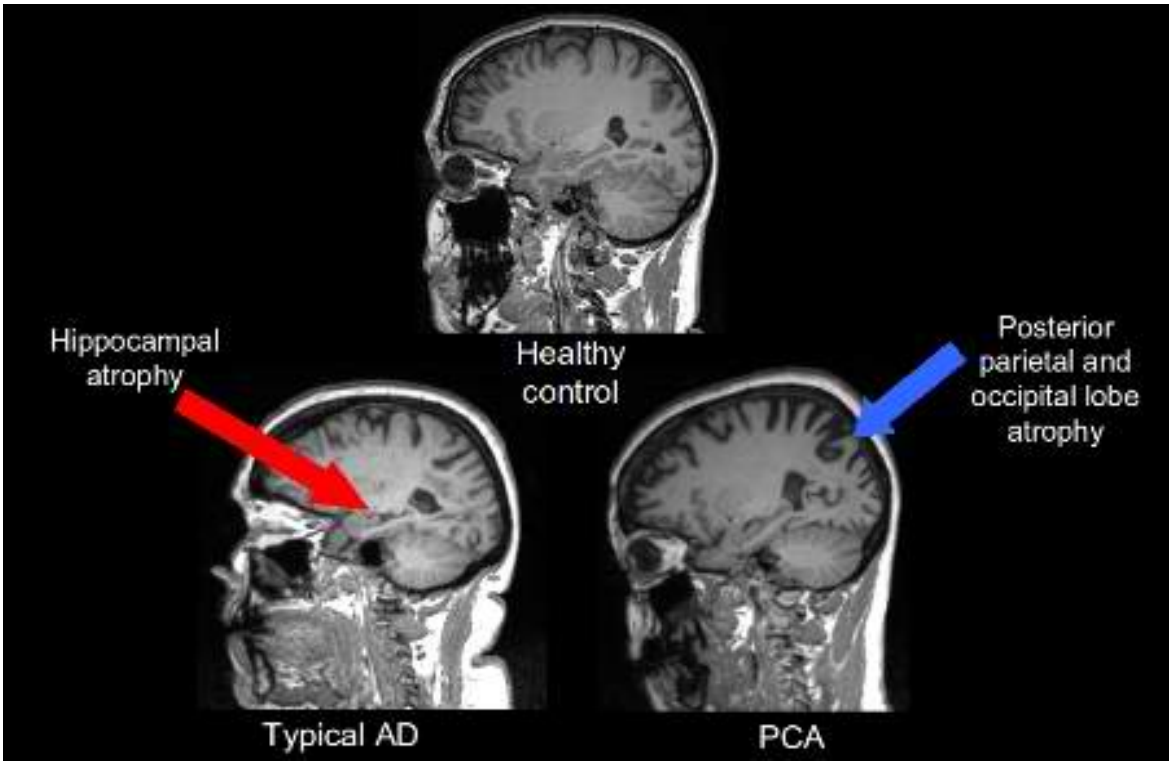

Fig. 5 Medial Temporal Lobe Atrophy and Posterior Cortical Atrophy (see "MTA/PCA" in bibliography)

In addition, other changes in the brain have been detected in Alzheimer's patients, which Scheltens provides more detailed information on in his paper (195).

The course of the atrophy is as important as the atrophy itself. Sick people's hippocampal volume becomes less at a faster rate in contrast to healthy ones (Scheltens 195). On top of that there is a link between the loss of memory and the damage of the hippocampus "across the spectrum from normal aging to dementia" (Scheltens 195). Due to the fact that brain changes might not be easily discovered through simple visual inspection, new serial imaging techniques measuring the volume, also referred to as **serial MRI**

imaging, have been created recently, which have shown extensive neocortical brain differences in addition to medial temporal lobe atrophy (Scheltens 195).

Vascular changes in the brain have been mainly detected in patients suffering from the late-onset type of Alzheimer's. They can be found on MRI images as white matter hyperintensities, lacunar infarcts, and microbleeds (Scheltens 195). The following figures display these vascular differences:

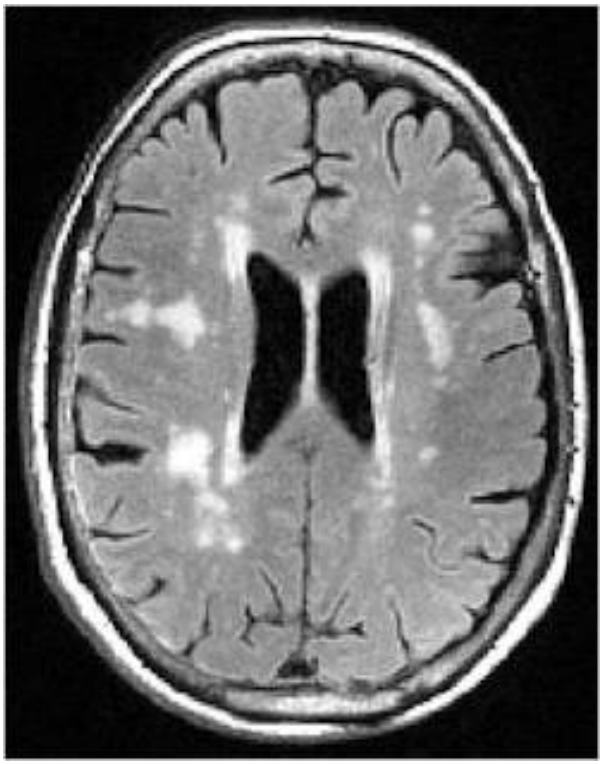

Fig. 6 White Matter Hyperintensities (see "WMH" in bibliography)

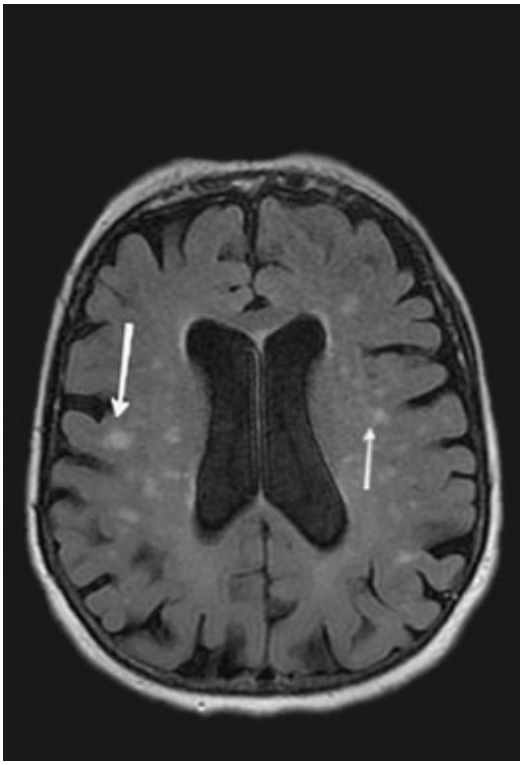

Fig. 7 Lacunar Infarcts (see "Lacunes" in bibliography)

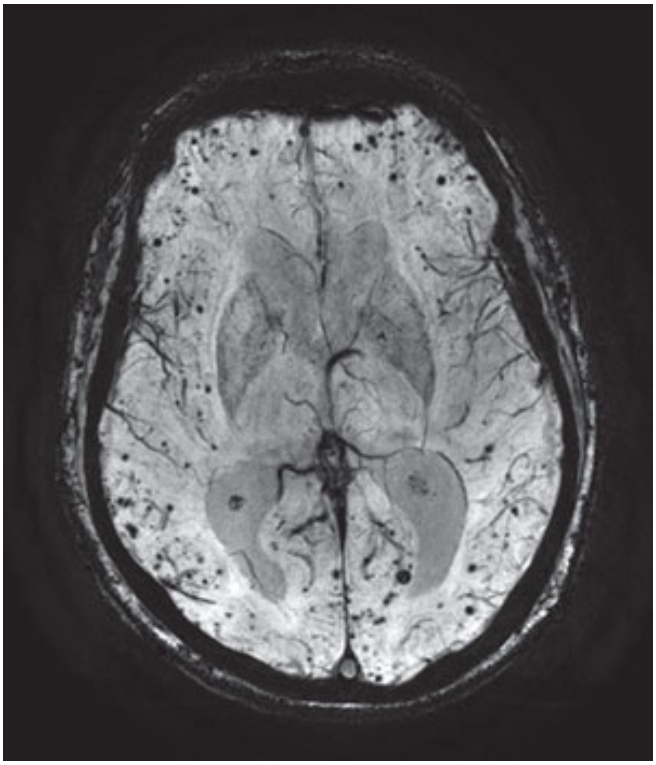

Fig. 8 Microbleeds (see "Microbleeds" in bibliography)

Frisoni et al. have extensively discussed the clinical usage of MRI (cf. Frisoni).

Functional/molecular imaging includes fMRI, PET, and SPECT.

fMRI is defined in the Merriam-Webster online dictionary as "magnetic resonance imaging

used to detect physical changes (as of blood flow) in the brain resulting from increased neuronal activity" (fMRI). The activity of neurons is indirectly measured resulting out of the measurement of blood oxygen level-dependent (abbreviated as BOLD) MR signal differences (Johnson et al., *Brain Imaging* 6). BOLD is a contrast medium (Contrast Medium). To be more precise, as pointed out by Johnson et al., "BOLD fMRI is considered to reflect the integrated synaptic activity of neurons via MRI signal changes because of changes in blood flow, blood volume, and the blood oxyhemoglobin/deoxyhemoglobin ratio" (*Brain Imaging* 6). As far as Alzheimer's disease patients are concerned, fMRI imaging has shown lowered activity of the parietal and hippocampal regions of the brain. In primary cortices, which were not attacked, higher activity has been detected (Small 1233). The difference in activated brain areas of healthy and sick people completing certain tasks and concentrating on different stimuli can be seen in figure nine. The yellow and orange regions highlight those parts of the brain, which are activated while performing the task, whereas the blue regions highlight those parts, which are activated less. The deactivated parts of the brain are not normal in people having Aβ accumulations, as they do not completely deactivate (Activation/Deactivation):

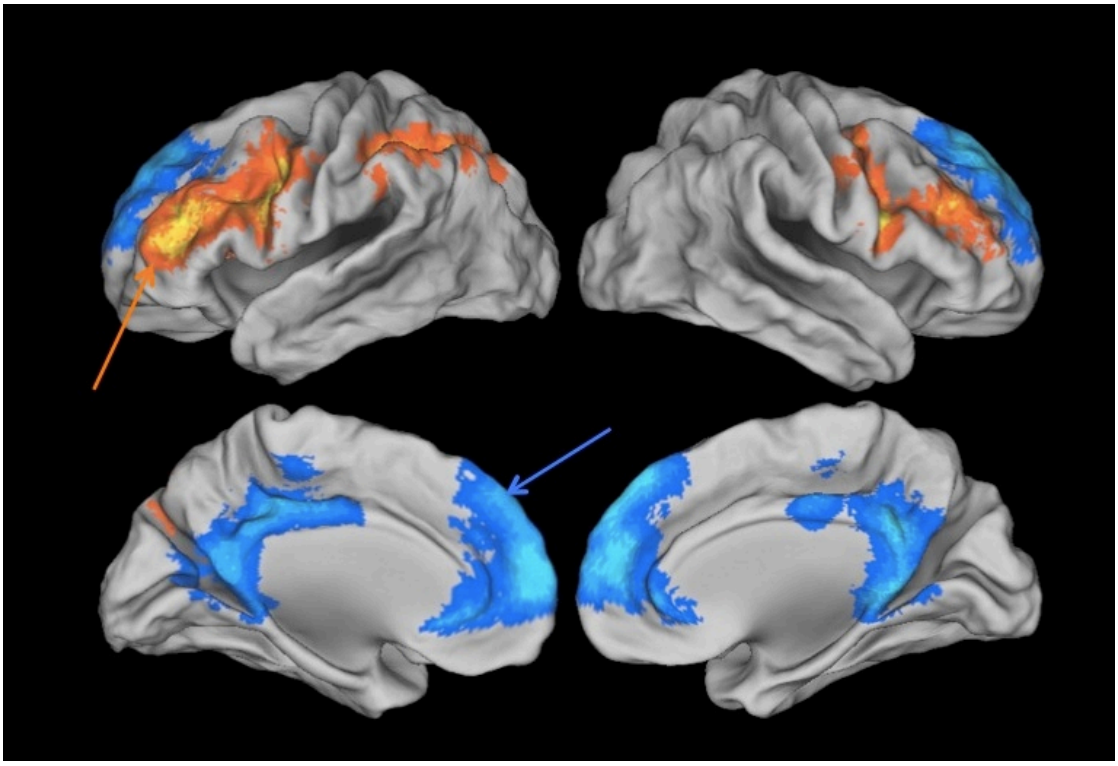

Fig. 9 Activation and Deactivation (see "Activation/Deactivation" in bibliography)

More information on fMRI is provided by Sperling (cf. Sperling).

Mainly, fluorodeoxyglucose (abbreviated as [18F]FDG) **PET** is said to show the

activity of synapses (Johnson et al., *Brain Imaging* 8). PET is, according to the Merriam-Webster online dictionary, a "tomography in which a cross-sectional image of regional metabolism is obtained by a usually color-coded representation of the distribution of gamma radiation given off in the collision of electrons in cells with positrons emitted by radionuclides incorporated into metabolic substances that have been administered (as by injection)" (PET). Fluorodeoxyglucose is a metabolic tracer (Scheltens 195). To be more specific, a tracer is defined in the Merriam-Webster online dictionary as "a labeled element or atom that can be traced throughout chemical or biological processes by its radioactivity or its unusual isotopic mass" (Tracer). The metabolism of the brain can be examined with the help of PET, as brain metabolism differences might exist before structural ones. The metabolism of glucose can be made visible through the usage of [18F]FDG (Scheltens 195). Hypometabolism, which means that someone has an unusually low metabolic rate (Hypometabolism), can be detected in the parietal as well as posterior cingulate cortex in sick people (Scheltens 195). Although clinical diagnosis and structural imaging are suggested for a diagnosis than PET at present, there has been a recent finding making it possible to visualize amyloid in vivo using PET (Scheltens 195 and 197). Johnson et al. offer a deeper insight into this new usage of PET (cf. Johnson et al., *Criteria for Amyloid PET*). A reduced brain metabolism in people suffering from MCI and Alzheimer's disease can be seen in figure ten:

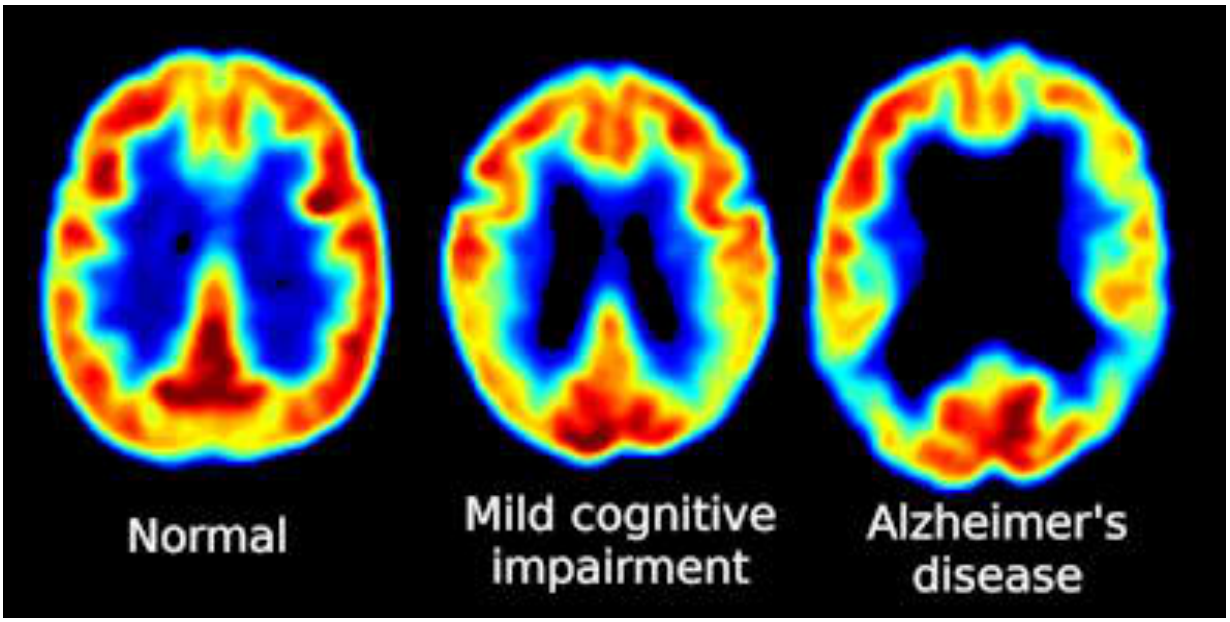

Fig. 10 Reduced Brain Metabolism (see "Metabolism" in bibliography)

The cerebral blood flow is usually measured by **SPECT,** which is "a medical imaging technique that is used especially for mapping brain function and that is similar to positron-

emission tomography in using the photons emitted by the agency of a radioactive tracer to create an image but that differs in being able to detect only a single photon for each nuclear disintegration and in generating a lower-quality image" (SPECT) with the tracer Tc-hexamethylpropyleneamine oxime (abbreviated as [99m]TcHMPAO) (Scheltens 198). In Alzheimer's patients, bilateral temporoparietal hypoperfusion, defined as reduction in blood flow, can be usually discovered. However, neuroreceptor studies, making use of ioflupane-CIT (abbreviated as [123I]FP-CIT), give the opportunity to make the loss and death of nigrostriatal dopamine neurons visible (Scheltens 198). The nigrostriatal way (Nigrostriatal) connects the substantia nigra, which is the brain structure located in the midbrain (Substantia Nigra), and the striatum, which is the part of the forebrain below the cerebral cortex (Striatum). An example of an SPECT imaging illustrating hypoperfusion is shown in figure eleven:

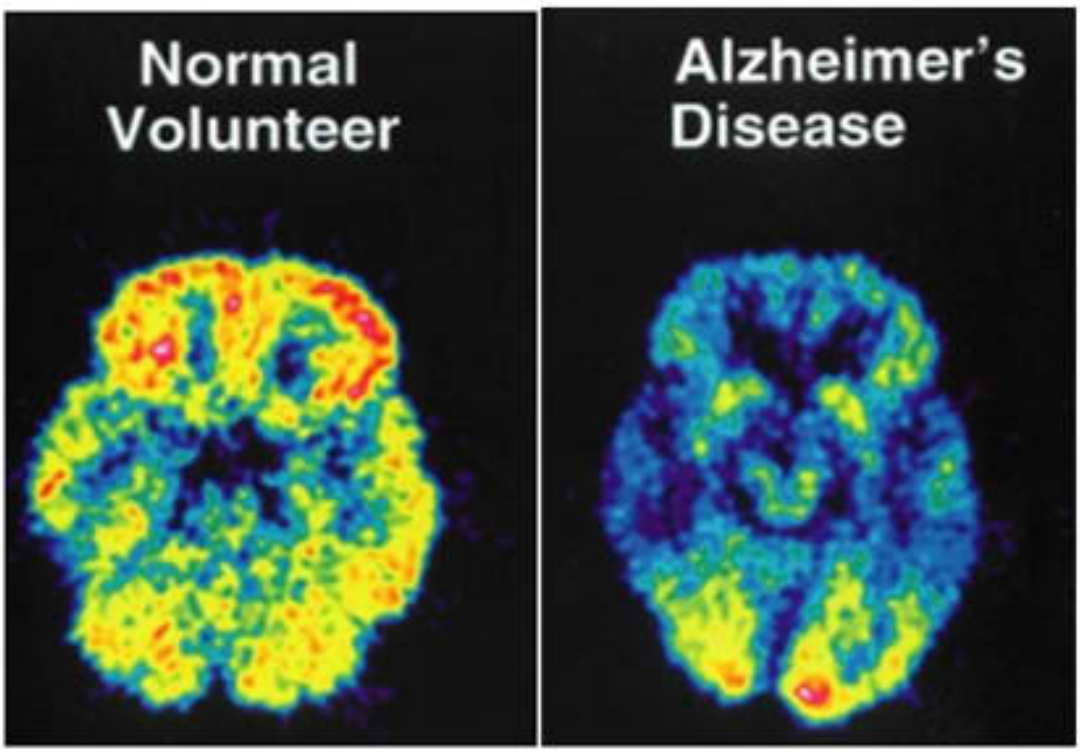

Fig. 11 Reduced Blood Flow (see "Blood Flow" in bibliography)

Matsuda has thoroughly dealt with SPECT imaging in Alzheimer's disease (cf. Matsuda).

2.5.1.2 Blood and Cerebrospinal Fluid

Due to the fact that the CSF touches the brain's extracellular space and can reflect the brain's biochemical differences, it is said to be most suitable for uncovering Alzheimer's disease. Generally speaking, it is differentiated between basic and core biomarkers (Blennow et al., *CSF* 132). Kaj Blennow et al. claim that whereas the former detect "conditions that might mimic or coexist with AD [Alzheimer's disease]", the latter detect "the central pathogenic processes in AD [Alzheimer's disease]" (*CSF* 132).

Search for peripheral blood biomarkers for Alzheimer's disease has turned out to be a rather difficult task. Although scientists have suggested a number of biomarkers in blood, it has not been easy to prove the level differences of these molecules in unconnected investigations (Blennow et al., *CSF* 139). Nevertheless, Christian Humpel is of the opinion that attention should be focused on biomarkers in, for example, blood as "[t]he routine diagnosis of AD [Alzheimer's disease] and mixed forms of dementia from CSF has several drawbacks: lumbar puncture and collection of CSF is an invasive treatment with potential side effects, and screening of patients is often difficult and follow-up analysis of the same patient over several years is problematic" (27).

Generally speaking, blood cells, serum, or plasma can serve as **blood biomarkers** for Alzheimer's disease. However, as many studies have focused on plasma Aβ as a biomarker, attention will be primarily paid to the investigations focusing on the blood biomarker obtained from plasma (Momeni and Ferrari 16).

As just mentioned, plasma Aβ has been thoroughly discussed as a probable biomarker. Nevertheless, the results of the various investigations do not agree. Whereas some studies have detected that the plasma levels of Aβ were a little higher in individuals suffering from Alzheimer's compared to healthy ones, others have not revealed a difference at all. Investigations have also dealt with the value of plasma Aβ tests in order to find out if a cognitive normal and older person will suffer from Alzheimer's disease one day. They have indicated that the plasma levels of Aβ overlap to some extent in people having preclinical Alzheimer's and people who have not and will not have the disease. It has been shown as well that people having high plasma levels of Aβ or a large Aβ ratio are more likely to suffer from Alzheimer's later in life. However, other studies have again come up with opposite results (Blennow et al., *CSF* 139). Blennow et al. point out that "[t]hese discouraging results are probably explained by the fact that plasma Aβ is derived from peripheral tissues, and does not reflect brain Aβ turnover or metabolism" (*CSF* 139). They add that "the

hydrophobic nature of Aβ makes the peptide bind to plasma proteins, which could result in epitope masking and analytical interferences" (Blennow et al., *CSF* 139). Irizarry, Mayeux et al., Pomara et al., and Graff-Radford et al. have come up with these results (cf. Irizarry, Mayeux et al., *Plasma*, Pomara et al., and Graff-Radford et al.).

Due to the fact that it has not been discovered yet how the analytes' concentration in the blood is connected with the brain's pathological differences, Humpel suggests that "[t]he search for blood biomarkers that correlate with AD [Alzheimer's disease] should therefore begin with accepted CSF markers, such as Aβ and tau-related biomarkers and further include factors involved in inflammation, protein aging and cell death, and cerebrovascular dysfunctions" (27). Aβ and tau biomarkers will be discussed below. Possible novel blood biomarkers have been thoroughly investigated by Snyder et al. (cf. Snyder et al.).

The three main **CSF biomarkers** for Alzheimer's disease, namely total tau (abbreviated as t-tau), phosphorylated tau (abbreviated as p-tau), and Aβ will be discussed in this section as they have not only been frequently investigated, but also because they offer a deeper insight in all stages of Alzheimer's disease, which is thoroughly described in Rosén et al.'s review on biomarkers (cf. Rosén et al. 8).

As far as basic biomarkers are concerned, they involve chemical tests for the blood-brain barrier (abbreviated as BBB) status as well as the brain's inflammatory processes (Blennow et al., *CSF* 132). To be more specific, Blennow et al. explain that "[t]he BBB is formed from the restricted permeability of the capillaries in the brain, and serves to maintain a controlled milieu for neurons" (*CSF* 132). The generally used biomarker for the function of the BBB is the CSF:serum albumin ratio. However, when the ratio is higher than usual, in for instance inflammatory or cerebrovascular diseases, infections and brain tumors, it means that the BBB is damaged. People suffering solely from Alzheimer's disease do not have an abnormal CSF:serum albumin ratio. Therefore, it can be useful for ruling out other reasons for the damage of the brain and for recognizing people who have Alzheimer's disease. Furthermore, antibodies are created by the immune system when suffering from chronic inflammatory or infectious disorders, like multiple sclerosis or neuroborreliosis, in the central nervous system (abbreviated as CNS). These events are referred to as intrathecal immunoglobulin production, which is measured quantitatively or qualitatively. Most people diagnosed with Alzheimer's are either said to have mild or no indication of intrathecal immunoglobulin production at all. Hence, in order to rule out chronic inflammatory or infectious disorders, measuring intrathecal immunoglobulin production is very useful in the clinical work-up of Alzheimer's disease (Blennow, *CSF* 132). More information is provided

by Tibbling, Link, and Öhman, Blennow et al., and Andersson et al. (cf. Tibbling, Link, and Öhman, Blennow et al., *Blood-brain-disturbance*, and Andersson et al.).

The core biomarkers detect the pathology of amyloid and NFTs as well as axonal degeneration (Blennow et al., *CSF* 132-133). An axon is, as the Merriam-Webster online dictionary defines, "a usually long and single nerve-cell process that usually conducts impulses away from the cell body" (Axon). Blennow et al. point out that the majorities of the investigations dealing with core biomarkers have tried to find a link "between CSF biomarkers measured during life and neuropathological findings at autopsy" (*CSF* 133). The development of the Aβ biomarker is based on the main findings that the formation of Aβ occurs in the course of usual cell metabolism and that Aβ is secreted into the CSF (Blennow, *CSF* et al.). The creation of chemical tests for this Aβ isoform evolved out of the other discovery that "Aβ is the most abundant species of Aβ in amyloid plaques" (Blennow et al., *CSF* 133). It is assumed that CSF levels of Aβ are a reflection of levels of fibrillar Aβ as well as accumulation of amyloid plaques (Blennow et al., *CSF* 133). As Blennow et al. emphasize, the most prominent reason why the CSF levels of Aβ decrease in people suffering from Alzheimer's is because the "aggregation of Aβ into plaques [...] results in reduced availability of Aβ to diffuse into the CSF" (*CSF* 133). Strozyk et al. and Tapiola et al. have investigated this relationship (cf. Stozyk et al. and Tapiola et al.). As far as t-tau and p-tau are concerned, the chemical test of the former usually makes use of antibodies, which reveal all isoforms of tau regardless of their phosphorylation state and the chemical test of the latter usually makes use of antibodies, which are limited to certain phosphorylated tau forms. It is presumed that CSF t-tau is a reflection of the degree of neuronal and axonal degeneration as well as brain damage and that CSF p-tau is a reflection of the phosphorylation state of tau as well as the development of NFTs. Next to that CSF t-tau is linked to CSF p-tau in sick and healthy people. In sick people, both levels are higher. It has also been revealed that levels of p-tau might be primarily helpful in distinguishing different *dementias*. In addition, whereas only lower Aβ levels may indicate Alzheimer's in healthy, older people, people suffering from MCI and with high CSF levels of p-tau and/or t-tau are said to develop Alzheimer's disease at a faster rate and their cognition becomes worse more rapidly. Importantly, a more accurate diagnosis is achieved, when the biomarkers are not taken into account individually, but together, which is why a so called multiparameter chemical test has been created (Blennow et al. 132-135). Furthermore, in investigations including all three biomarkers, people suffering from MCI and having prodromal Alzheimer's (Blennow et al., *CSF* 135), which means that people already have premonitory

symptoms (Prodrome), have been recognized. Among others, Sjögren et al., Koopman et al., Gustafson et al., Blom et al., Hansson et al., and Maddalena et al. have come up with these results (cf. Sjögren et al., Koopman et al., Gustafson et al., Blom et al., Hansson et al., and Maddalena et al.).

Biomarkers in the CSF are also still investigated. It has been suggested that despite the fact that the amount of tau and Aβ in the CSF are a reflection of the Alzheimer's' main pathological development, other manifestations of the disease's course like synaptic changes, which are said to occur at first, should be considered as well (Zetterberg and Blennow 364). Possible novel CSF biomarkers have been outlined by Perrin et al. (cf. Perrin et al.).

2.6 Treatment

"There is currently no cure for Alzheimer's disease."[9]

Generally speaking, medical doctors distinguish between a pharmacological treatment and a nonpharmacological therapy. First of all, the pharmacological treatment options will be described followed by a brief outline of the nonpharmacological ones.

2.6.1 Pharmacological Treatment

When being treated pharmacologically, one receives medication in order to prevent a disease from spreading or to counteract the clinical manifestations. However, neurodegeneration in Alzheimer's disease can still not be treated causing patients to die eventually. Nevertheless, drugs as well as therapies, which hopefully reduce the speed of neurodegeneration or even fully prevent it from spreading, are currently being tested all over the world (Thies and Bleiler 214). It needs to be stressed that although disease-modifying therapies are still needed, the active medical management of Alzheimer's can increase the patient's as well as his/her loved ones' well-being in every stage (Thies and Bleiler 214), as has been demonstrated by several investigations conducted by, among others, Vickrey et al., Voisin and Vellas, and Grossberg et al. (cf. Vickrey et al., Voisin and Vellas, and Grossberg et al.).

[9] Alzheimer's Society, *What is Alzheimer's* 5.

To be more precise, as William Thies and Laura Bleiler emphasize, "[a]ctive management includes (1) appropriate use of available treatment options; (2) effective management of coexisting conditions; (3) coordination of care among physicians, other health care professionals, and lay caregivers; (4) participation in activities and/or adult daycare programs; and (5) taking part in support groups and supportive services" (214).

The U.S. Food and Drug Administration has agreed to five drugs, divided into cholinesterase inhibitors and the N-methyl-D-aspartate receptor antagonist, which lead to an improvement of the clinical manifestations for a limited period of time. The level of neurotransmitters is being raised through the intake of the drugs (Thies and Bleiler 214). However, Thies and Bleiler stress that "[t]he effectiveness of these drugs varies across the population" (214).

2.6.1.1 Cholinesterase Inhibitors

As far as the pharmacological treatment of Alzheimer's disease is concerned, attention was mainly paid to the deterioration of those neurons including acetylcholine (abbreviated as ACh) in patients' brains. Hence, scientists created cholinesterase inhibitors (abbreviated as ChEIs), namely donepezil, galantamine, rivatigmine, and tacrine, in order to block acetylcholinesterase (abbreviated as AChE) (Farlow, Miller, and Pejovic 409). In other words, ACh is split at a lower speed, which is achieved through stopping AChE (Alzheimer's Association, *Treatment* 1). As a result, cholinergic synaptic transmission is improved (Farlow Miller, and Pejovic 409). A review on ChEIs is given by Cummings (cf. Cummings).

Tacrine, distributed as Cognex and used for treating mild-to-moderate Alzheimer's, is not administered anymore because of patients' poor reaction and liver damage (Farlow, Miller, and Pejovic 409).

As **donepezil,** marketed as Aricept, has a half-life of about 70 hours, one tablet per day, to dissolve on the tongue or swallow, is prescribed. In contrast to the other ChEIs, donepezil can also be used for treating severe Alzheimer's disease. Despite its side effects, summarized in figure twelve below, studies have indicated that donepezil does not only have a positive influence on cognition and overall condition, but might also help in reducing functional and behavioral issues like depression, anxiety, and apathy. The metabolism of donepezil takes place in the liver. However, 17 percent of donepezil is exuded with its original concentration through urinating. People suffering from problems with the liver or

kidney can still take in a lower dose of donepezil (Farlow, Miller, and Pejovic 409). More detailed information about this drug is provided by Seltzer (cf. Seltzer).

Galantamine, distributed as Razadyne, was administered two times a day before a new formula was introduced releasing the ingredients over a longer period of time. Hence, it can be ingested once a day. The side effects of galantamine are also described in figure twelve below. Many studies have detected that it improves cognition, behavior, overall function, and daily living activities. Whereas about 70 percent of the metabolism is in the liver, the remaining 30 percent are exuded with its original concentration through urinating. People having kidney or liver problems should be prescribed a smaller dosage (Farlow, Miller, and Pejovic 410-411). Loy and Schneider offer a deeper insight into the clinical effects of this drug (cf. Loy and Schneider).

Rivastigmine, marketed as Exelon, only has a half-life of about one to two hours in plasma and CSF. Therefore, it is necessary for patients to receive a dosage two times a day. It can be prescribed orally or as transdermal patch. The advantage of the latter is that patients react better to it. The side effects of rivastigmine can also be looked at in figure twelve below. Apart from the enhancement of cognition, overall condition, and daily living activities, it is said that it might enhance the attention focusing span as well. On top of that it has also been shown that the usage of rivastigmine might positively influence the clinical manifestations through delaying their outbreak and in turn decreasing the possibility of having to draw on antipsychotic drugs. Rivastigmine is not metabolized in the liver for 97 percent and, therefore, the chance of the drug affecting another drug is small (Farlow, Miller, and Pejovic 410). Birks et al. have investigated the clinical effect and safety of it (cf. Birks et al.).

2.6.1.2 N-Methyl-D-Aspartate Receptor Antagonist Memantine

Memantine is thought to stop N-methly-D-aspartate receptor (abbreviated as NMDR)-mediated excitotoxicity and to make normal activity of synapses possible at the same time. In excitotoxicity, neurons are killed through glutamate, which is a neurotransmitter (Farlow, Miller, and Pejovic 411).

Memantine, distributed as Nameda, was used as first drug to treat people suffering from moderate-to-severe Alzheimer's disease. Although its half-life is about 70 hours, it is suggested to ingest memantine twice a day. In combination with donepezil or not, memantine improves cognitive and overall function, daily living activities as well as

behavior of people having arrived in the moderate-to-severe stages. The side effects are outlined below in figure twelve. 48 percent of Memantine is mainly exuded with its original concentration through urinating. However, it has been indicated that there is a metabolism in the liver as well. Furthermore, it does not react with other drugs. People having kidney problems should take a smaller dosage of memantine and additionally other drugs, which alkalize urine (Farlow, Miller, and Pejovic 411). Reisberg et al. provide more information on memantine (cf. Reisberg et al.).

Generic	Brand	Approved For	Side Effects
donepezil	Aricept	All stages	Nausea, vomiting, loss of appetite and increased frequency of bowl movements.
galantamine	Razadyne	Mild to moderate	Nausea, vomiting, loss of appetite and increased frequency of bowl movements.
memantine	Namenda	Moderate to severe	Headache, constipation, confusion and dizziness.
rivastigmine	Exelon	Mild to moderate	Nausea, vomiting, loss of appetite and increased frequency of bowl movements.
tacrine	Cognex	Mild to moderate	Possible liver damage, nausea, and vomiting.

Fig. 12 At-a-Glance Treatment Chart (see "Alzheimer's Association, *Treatment* 3" in bibliography)

2.6.2 Nonpharmacological Therapy

Nonpharmacological therapy is referred to treatment options without medication such as the training of cognition and the intervention of behavior (Thies and Bleiler 214). Improvements can be achieved through, among others, reflexology, chiropractic, osteopathy, homeopathy, acupuncture, dietary supplements, herbal medicine, light therapy, sensory stimulations and aromatherapy (Alzheimer's Society, *Non-pharmacological Therapies* 2). Importantly, nonpharmacological therapies cannot stop Alzheimer's disease. Whereas it is hoped that through some therapies, mental health is kept or the brain is supported in compensating disabilities, others aim at optimizing the quality of life or decreasing behavioral symptoms like aggression, agitation, sleep disorder, walking without destination or purpose, apathy, and depression. Many nonpharmacological options have been suggested and researched. However, only a small number of these studies provide proof that they work efficiently (Thies and Bleiler 214). It has been indicated, as pointed out by Thies and Bleiler, that

certain nonpharmacological therapies might "improve or stabilize cognitive function, performance of daily activities, behavior, mood, and quality of life" (214). Olazarán et al. have carried out research in this context (cf. Olazarán et al.).

2.7 Current Research and Outlook

"In terms of overall outlook, I am very encouraged that our discipline of biotechnology and medicine in general has become much better in the last 5-10 years at successfully taking quality basic science and transferring it into meaningful therapeutic medicines that can help patients. Hopefully this trend will continue."
Dr. Dale Schenk – Neuroscientist/Alzheimer's researcher[10]

In the sections 2.1 to 2.6, everything, which is currently known and assumed about the etiology and pathology of Alzheimer's disease, has been presented. Attention has also been paid to the latest research regarding risk factors, preventative measures, and diagnostic as well as treatment options.

As far as risk factors are concerned, scientists' opinions still differ on the causes which are said to most likely trigger Alzheimer's and have come up with opposing results. The risk factors as well as the preventative measures, which have been repeatedly discussed in research, have been outlined in sections 2.2 and 2.3. Both the most discussed risk factors and preventative measures are still being investigated today.

Furthermore, the diagnostic options for Alzheimer's have been outlined in section 2.5. Emphasis has been put on brain imaging techniques as well as biomarkers in the CSF and blood. In this context, studies are conducted at present as well (see section 2.5.1).

Pharmacological and nonpharmacological treatments have also been described (see section 2.6). Although the search for a disease-modifying treatment for this disease continues, the currently available options can at least increase the well-being of Alzheimer's patients (see section 2.6.1). However, as far as disease-modifying treatments are concerned, promising achievements have already been made. Dr. Dale Schenk, Chief Executive Officer of Prothena, invented the Aβ immunotherapy, "which seeks to use the body's own immune system to rid the brain of the plaque that is the hallmark of Alzheimer's" (Beene), and which, in addition to "[h]is work […] in early detection, testing, and other therapeutic pathways – has led to the most advanced potential treatment approaches for the [Alzheimer's] disease" (Beene).

[10] Schenk.

Regarding his work, Dr. Schenk himself gives an outlook on what the future may hold:

> I think we are on the verge at long last of seeing effective treatment particularly for Abeta immunotherapy in the early stages of the disease. It's taken a great deal of time and some frustration to zero in the early aspects of the disease but in retrospect its fairly obvious in the sense that treatment of the brain prior to massive neuronal loss is likely to be much more effective than later after the damage has been done. (Schenk)

3 The One With the News

While the first part of this thesis focused on the theoretical basis and the known medical facts of Alzheimer's, this chapter will analyze how the disease is portrayed in literature, i.e. the narratives selected for illustration. The collection of short stories *The One With the News* by Sandra Sabatini serves as an adequate example since the book is about Alzheimer's and provides an insight into what it means to suffer from this horrible disease and the experiences of people dealing with and caring for an affected loved one.

First of all, information on the author of the book will be given followed by a brief introduction to the short stories' genre and structure. Then the plot and the setting will be outlined. The next two parts of the paper will deal with a description of the characters and themes of the book. As the main focus of this thesis is the portrayal of Alzheimer's in literature, an analysis of the narrative technique as well as the text's style will not be included as this would exceed the extent of this thesis.

3.1 Author

"'Creative writing gives you the ability to think about how to tell the story. […] As a creative writer, I get to help make it interesting.'"
Sandra Sabatini – Author and University Professor[11]

Sandra Sabatini, the Canadian author of *The One With the News,* was born in Guelph in 1959. Apart from writing, she works as an English professor at the University of Guelph, where she earned her Bachelor's and Master's degree. In 2001, she finished her Doctor of Philosophy degree at the University of Waterloo (Villett and University).

[11] Sabatini qtd. in University.

She is married and has five children. Sabatini says that she is inspired by her family life. For example, the inspiration for the collection of the short stories *The One With the News* can be traced back to her father who suffered from Alzheimer's disease (Villett).

Sandra Sabatini was awarded a public price twice with her short story "Gifts from the Well-Intentioned" (see section 3.7.10). She received the University of Waterloo Creative Writing Award and she was the winner of the Tom Wolf Memorial Short Story Competition. In addition, the short story "The One With the News" (see section 3.7.8) was on the shortlist for the Journey Prize in 1999 (Sabatini, *News* 143).

Sabatini also wrote three other books, namely the non-fiction book *Making Babies: Infants in Canadian Fiction,* and the novels *The Dolphins at Sainte-Marie* and *Dante's War* (cf. Sabatini, *Babies,* Sabatini, *Dolphins,* and Sabatini, *War*).

3.2 Genre

"'Short stories are tiny windows into other worlds and other minds and other dreams. They are journeys you can make to the far side of the universe and still be back in time for dinner.'"
Neil Gaiman – Author[12]

The book *The One With the News* is divided into ten short stories. Although the short stories are fictional, they are realistic as all of them address a very serious issue affecting millions of people and families worldwide, namely suffering from Alzheimer's disease and dealing with as well as caring for an affected loved one (Prince, Prina, and Guerchet 1). Each short story focuses on and is told from the perspective of a different main character outlining how they are affected by the disease. These stories are all interconnected to a certain extent as they center around the same sick person. To be more precise, the main characters are both family members of the sufferer of Alzheimer's and people living in his immediate surroundings. One story is even told from the point of view of the Alzheimer's patient himself.

The titles of the short stories are as follows: "Clean Hands", "The Light That Fell Behind Him", "Ambrose Dreams", "Collecting", "Making Tea", "The Cemeteries Act", "Mitigations", "The One With the News", "Epigrams", and "Gifts from the Well-Intentioned". The last but one is further divided into seven short parts, called "A Smell to Cover a Smell", "No Good Comes of Fooling", "If the Fence Needs Painting", "As He

[12] Gaiman qtd. in Wagner, Golden, and Bissette 401.

Made Them, He Matched Them", "Remember Who You Belong To… and I Don't Mean Me", "Change and Decay in All Around I See", and "Nobody Likes a Skinny Girl". When interpreting each short story, the original title will be used to introduce the respective story. All of the other section-titles will be entitled according to the discussed topic of the section resulting from the stories apart from the one of "Epigrams", as this one has already been divided into several parts by the author.

3.3 Plot

"'Fiction is like a spider's web, attached ever so lightly perhaps, but still attached to life at all four corners.'"
Virginia Woolf – Author[13]

The book is about the Alzheimer's patient Ambrose McLean. Whereas most short stories are told from the perspective of a different family member or people living in his immediate surroundings, one is told from the perspective of the Alzheimer's sufferer himself. Primarily, the characters reveal how they are affected by this horrible disease and how they deal with or care for the sick man.

The first short story "Clean Hands" (see section 3.7.1) focuses on Peggy who is Ambrose's wife. She is the primary caretaker of Ambrose when he lives at home. In the story one learns about her varying emotions ranging from grief, loneliness, and worry to exhaustion and fatigue due to her husband's disease. The woman also feels guilty, especially when Ambrose is placed in a nursing home. Apart from that one is introduced to Ambrose and his disease. Generally speaking, almost the whole course of the disease is outlined starting with his first problems with memory and ending with him being placed in a nursing home (Sabatini, *News* 9-22).

The second story "The Light That Fell Behind Him" (see section 3.7.2) centers around Alice who is Ambrose's and Peggy's biological daughter. One finds out more about her possible coping strategies with her father's illness and feelings of guilt as she is not in very close contact with her parents. Furthermore, Alice's alleged fears are described which most likely can be traced back to her family history as familial Alzheimer's seems to run in the McLean family (Sabatini, *News* 23-34).

[13] Woolf qtd. in Lauter 30.

The third short story "Ambrose Dreams" (see section 3.7.3) is about Ambrose's and Peggy's dreams (Sabatini, *News* 35-42).

In the fourth story "Collecting" (see section 3.7.4), Stephen, who is the McLean family's paper boy, is introduced. Although the teenager witnesses Ambrose's changing behavior, he is not able to attribute it to Alzheimer's and hence does not seem to know how to handle the new situation when asking Ambrose for the newspaper's money (Sabatini, *News* 43-54).

The fifth short story "Making Tea" (see section 3.7.5) is told from the perspective from the Alzheimer's sufferer Ambrose himself. Insight is given into his largely confusing thoughts as well as his feelings because of his illness, which in turn is highly revealing as no one certainly knows what goes on in an Alzheimer's patient's mind (Sabatini, *News* 55-66).

In the sixth story "The Cemeteries Act" (see section 3.7.6), one learns about Larry who is Connie's husband. Connie is Ambrose's and Peggy's adoptive daughter. Throughout this story, one finds out in how far Ambrose's disease and Connie's close relationship to the sick man seem to affect Larry's and Connie's marriage (Sabatini, *News* 67-78).

The seventh short story "Mitigations" (see section 3.7.7) focuses on Gord who works as a nurse in the Health Centre, where Ambrose stays when he arrives in a later stage. When reading this story, one gets the impression that Gord is very devoted to his job and that working with *demented* people is his vocation (Sabatini, *News* 79-92).

In the eighth story "The One With the News" (see section 3.7.8), alleged reasons for Connie's close relationship to her foster father Ambrose are pointed out. Furthermore, one learns more about how she is affected by his illness (Sabatini, *News* 93-108).

The ninth short story "Epigrams" (see section 3.7.9) is divided into seven short sections which center around Ambrose's funeral. Peggy's and Connie's thoughts regarding Ambrose's life and death and his disease, which most likely cross their minds during the religious ceremony, are revealed (Sabatini, *News* 109-126).

In the tenth story "Gifts from the Well-Intentioned" (see section 3.7.10), Peggy's feelings after Ambrose has been placed in a nursing home are outlined as well as how she feels after Ambrose has died. It is also highlighted that Peggy still worries a lot, even after her husband's death. In addition, the couple John Bayley and Iris Murdoch is introduced. The man is a British writer who has composed memoirs of his wife, who was an Alzheimer's patient as well. The changing and declining relationship between Ambrose and Peggy as well as John and Iris due to Alzheimer's is outlined alongside one another (Sabatini, *News* 127-139).

3.4 Setting

"'Truth is stranger than fiction, but it is because Fiction is obliged to stick to possibilities; Truth isn't.'"
Mark Twain – Author[14]

The story takes place in Canada presumably in Guelph, Ontario in the late 20th century. However, it is characterized by flashbacks to Ambrose's as well as Peggy's time in Scotland. To be more specific, Peggy grew up in Scotland and lived there until she decided to marry Ambrose and moved to Canada (Sabatini, *News* 14). Ambrose, whose grandparents were Scots as well and immigrated to Canada, spent some time in Scotland, most likely during World War Second (Sabatini, *News* 38 and 14). The couple also liked to travel to Scotland in their holidays (Sabatini, *News* 119-120).

Peggy is a Scottish-Canadian. It seems safe to argue that Ambrose and Alice are Scottish-Canadians as well. Ambrose's grandparents were Scots. Regarding her parents' heritage, Alice is also a Scottish-Canadian to a small degree. However, although Ambrose and Peggy seem to be attached to Scotland as they spent some of their holidays there, they do not seem to value or practice the Scottish traditions. To be more specific, in the short story "Ambrose Dreams" (see section 3.7.3), it is revealed how both of them feel about one popular Scottish custom: "Ambrose not only can't play the pipes, but he and Peggy both hate the sound of them. […] He has the heritage, but not the inclination. He thinks kilts are ridiculous. He says about men who wear them, though not in their hearing, 'Ooh, fly away, ye wee fairy', and he says it with a put-on Scottish burr" (Sabatini, *News* 38).

[14] Twain qtd. in Harnsberger 484.

3.5 Characters and Characterization

"'Literature can remind us that not all life is already written down: there are still so many stories to be told.'"
Colum McCann – Author[15]

In this section, a characterization of the main characters, i.e. the family members as well as the people of the immediate environment of the sufferer of Alzheimer's, will be given as only they are important for the later analysis of the chosen short stories.

3.5.1 Ambrose

Ambrose McLean suffers from Alzheimer's. One may assume that Ambrose was in his late sixties or early seventies when he started suffering from this horrible, ultimately fatal disease. He is married to Peggy and has one biological child, Alice, and one foster child, Connie, with his wife. Although he originally is from Canada, where he also lives, his grandparents were immigrants from Scotland (Sabatini, *News* 38). He allegedly served in the Second World War and then earned his money as a jeweler again (Sabatini, *News* 14).

Ambrose must have been a very religious person like his wife Peggy (Sabatini, *News* 29). He must have had a great sense of humor telling jokes and fooling around throughout his life (Sabatini, *News* 9 and 113). In his leisure time, he loved to watch baseball games and to take photos before he became sick (Sabatini, *News* 16 and 119). He and his wife also traveled a lot (Sabatini, *News* 28). The man was additionally passionate about flowers until he started suffering from Alzheimer's (Sabatini, *News* 119).

One gets the impression that Ambrose has always had a loving and fulfilling marriage with Peggy, which is reflected throughout the short stories. However, it seems that he has had a closer relationship to his foster daughter than to his biological one. The main reason for this assumption is the fact that Ambrose, presumably in a later stage of the disease, does not recognize Alice anymore and at the same time looks forward to seeing Connie (Sabatini, *News* 56-57). Furthermore, while Alice has moved farther away and has also not been in close contact with her parents, Connie has been actively involved in nursing Ambrose (Sabatini, *News* 23, 28, and 105), which will be discussed in detail in sections 3.7.2.1 and 3.7.6.1.

[15] McCann 350.

3.5.2 Peggy

Peggy McLean, born and grown up in Scotland, raising her five younger brothers, married Ambrose and moved to Canada (Sabatini, *News* 14). She takes care of her husband when he is sick. At first, she looks after him at home. Later, when the disease has become more severe, Ambrose is placed in a nursing home (Sabatini, *News* 33-34).

One the one hand, when reading the short stories, one realizes soon that Peggy must be a very loving, caring, and orderly housewife always putting her family first. It is indicated that Peggy would never neglect her children, as becomes evident, for instance, in the following passage:

> When she'd decided to repaper the bathroom, she went to the discount store and found in a bin exactly what she wanted. She'd walked out of the store without it because it was a *'Shand-Kydd' design* [Shan-Kydd is an English wallpaper business] and she refused to be bamboozled into buying wallpaper that would benefit the *irresponsible mother of the Princess of Wales* [Diana's mother had an affair with the heir of the wallpaper business at first and then got married to him]. Who, in the name of true love – *true lust* was more like it – had *left her young family* to be influenced by, of all people, Barbara Cartland [among others, author of romantic novels, married twice, step-grandmother of Diana], while she'd gallivanted *through Europe with her lover.* On her way back to her car Peggy had assured the absent Mrs Shand-Kydd, most probable *cause of her daughter's bulimia and suicidal tendencies,* that she would not be getting any of her money. Peggy had gone home, indignant and righteous, only to have Ambrose laugh in her face, walk out of the room shaking his head at her earnestness, her conviction that buying wallpaper out of a bin at the Wallpaper Barn would contribute to the profits of *wicked mothers.* [emphasis added] (Sabatini, *News* 10)

As is clearly illustrated in this passage, Peggy does not only judge the behavior of Diana's mother, namely leaving her kids, but also blames Mrs. Shand-Kydd for the poor health of her daughter Diana. This, in turn, could serve as an argument that Mrs. McLean will always be there for Alice and Connie as well as Ambrose, whom she takes great care of despite his changing personality because of his illness.

However, on the other hand, as is also slightly hinted at in the previous excerpt, one gets the impression that generally speaking, Peggy is a very serious person and has a rather conservative attitude, which, as one could argue, is also reflected in her deep religious faith, which she does not question at all before Ambrose has begun suffering from Alzheimer's (Sabatini, *News* 21).

She even seems to be aware of her rather stern personality to a certain extent:

> Peggy has the uneasy sense that the stiffness between her shoulders isn't new, isn't the result of living with Ambrose's disease, but rather something to do with the way she has always held herself. Sitting beside him she wonders if she all her life pushed him away with the stiff margin of her posture. She pressed starch into his collars and cuffs, turned from his kiss outside the door of his shop downtown. He bought her a nightie for Christmas one year, a sheer, lurid mauve that she thanked him for but never wore. (Sabatini, *News* 14)

In this context, one could argue that Peggy has been influenced by both her great-aunt and her mother who both seem to have been staunchly conservative. For example, when Peggy heavily suffers because of Ambrose's worsening condition, she remembers what her great-aunt used to say: "'Pride feels no pain'" (Sabatini, *News* 14). This proverb of the early 17th century "impl[ies] that inordinate self-esteem will not allow the admission that one might be suffering" (Pride). When considering the meaning of it and Peggy's current situation, it could be assumed that her great-aunt has suppressed her feelings of suffering and hence Peggy at least tries to imitate her behavior. Peggy has also learned another proverbial saying from her mother: "Her mother used to say about most things that happened in life, 'Ach well, there've been greater losses at sea. Just gie yersel a shake, lassie, and go sweeper the carpet.'" (Sabatini, *News* 18). However, one finds out in the book that she has difficulties with adhering to these pieces of advice (see sections 3.7.1.2, 3.7.1.3, and 3.7.1.4).

3.5.3 Alice

Alice is the biological daughter of Peggy and Ambrose. She is an adult living some distance away from her parents, approximately a two days' drive, in Halifax, Nova Scotia, together with her boyfriend (or husband) Tom (Sabatini, *News* 28). The young woman is going to become a pediatrician (Sabatini, *News* 34). Unlike her foster sister Connie, Alice does neither regularly see her parents, nor read her mother's letters, and hence does not actively take part in their lives (Sabatini, *News* 23 and 28), as will be outlined in more detail in section 3.7.2.

3.5.4 Connie

Connie, the foster daughter of Peggy and Ambrose, still lives nearby her foster parents (Sabatini, *News* 67 and 105). She is married to Larry, with whom she has two children (Sabatini, *News* 67-68). After her father and mother had died when she was six, and twelve years old, she moved to Peggy and Ambrose (Sabatini, *News* 68). Her childhood must have been very rough and was characterized by several traumatic experiences (Sabatini, *News* 94-101). She seems to admire her foster parents and she has a very close relationship with Ambrose, whom she seems to be very fond of (see section 3.7.8). Connie has always wanted to leave her troubled childhood behind, as is clearly stated in the following passage: "If I could stay long enough with Ambrose and get clean enough and buy enough shoes and acquire my Ph.D. then maybe I never was that cottage girl" (Sabatini, *News* 101). However, it is indicated that she works at a University and, therefore, it can be assumed that she is either in the middle of finishing her Ph.D. or that she has already acquired it (Sabatini, *News* 68 and 107). She has supported Peggy throughout Ambrose's declining state of health, whether at home or at the nursing home (Sabatini, *News* 104-105).

3.5.5 Larry

Larry, Connie's husband, works at a cemetery (Sabatini, *News* 68). He loves gardening, which seems to help him relax after a work day (Sabatini, *News* 69-70). His relationship to Ambrose does not seem to be very close, he rather seems to be jealous at Connie's and Ambrose's close rapport (see section 3.7.6.1). Moreover, Larry does not seem to think a lot about the future (Sabatini, *News* 76).

3.5.6 Stephen

Stephen is a teenager earning money as a paper boy. The McLean family is one of his customers (Sabatini, *News* 43).

The narrative suggests that Stephen's father does not live with Stephen's mother anymore (Sabatini, *News* 43). At some point in the short story "Collecting" (see section 3.7.4), it is even indicated that Stephen might have experienced or might have been exposed to verbal assaults (Sabatini, *News* 51). However, it seems that Stephen comes from a

financially stable family (Sabatini, *News* 45). Nevertheless, he has a job as he wants to buy electronic drums (Sabatini, *News* 43). The main reason why he earns the money by himself and does not ask his father, who, as pointed out in the story, would buy the musical instrument right away if Stephen asked, is that if he does not enjoy playing the drums anymore after a while, no one will blame him as it is his own money (Sabatini, *News* 50).

Furthermore, the teenage boy seems to be a good student (Sabatini, *News* 44). He is also very polite, but a little bit insecure. To be more specific, it is emphasized in the book that "Stephen hated collecting. It felt like asking people for money" (Sabatini, *News* 43).

3.5.7 Gord

Gord is a nurse at the Health Centre, where Ambrose stays for some afternoons in the beginning, but then moves in permanently (Sabatini, *News* 82 and 84). He loves to wear T-shirts and jeans (Sabatini, *News* 79). In his vacations, he rides his motorcycle, going as far as the USA (Sabatini, *News* 85). The young man seems to have a close relationship with his mother (Sabatini, *News* 79-80). However, he is supposed to see a periodontist as he has major troubles with his gum and, as a consequence, one tooth after the other becomes loose (Sabatini, *News* 79). Gord seems to love his job very much and to take it very seriously. On the one hand, Gord seems to be a very independent person who loves the feeling of freedom, but on the other hand, he still goes to work although he could easily afford taking some time off, which indicates that this job is more than a mere profession to him (see section 3.7.7.1).

3.6 Themes

"'Literature adds to reality, it does not simply describe it. It enriches the necessary competencies that daily life requires and provides; and in this respect, it irrigates the deserts that our lives have already become.'"
C.S. Lewis – Author[16]

There are three major themes addressed in the book. They are Alzheimer's disease in general, the caregiver burden, and family life.

[16] Lewis qtd. in Himmele, Himmele, and Potter 18.

3.6.1 Alzheimer's Disease

Throughout the book, one becomes familiar with the various symptoms of Alzheimer's and the stages one will go through (see sections 2.1.2 and 2.1.3). One does not only get a deep insight into Alzheimer's in general, but also what it can mean to suffer from this disease from a patient's point of view. To be more precise, the story "Making Tea" (see section 3.7.5) focuses on and is told from Ambrose's perspective, one learns more about the alleged feelings and thoughts Alzheimer's patients themselves can have. It could be assumed that finding out more about the Alzheimer's sufferer by himself, helps to understand better what goes on in sick people's minds.

All of the other short stories put emphasis on the experiences of Ambrose's family and people living in his immediate surroundings with his disease. Peggy, Ambrose's wife, is the primary caregiver of Ambrose and hence witnesses his deterioration process from the very beginning to the end. Even when he does not live at home anymore and is placed in a nursing home, she still visits him on a regular basis (see section 3.7.1). Since Ambrose has become sick, the disease has become the center of her life. Alice, Ambrose's and Peggy's biological daughter, does not take an active part in her parents' life anymore as she has moved away. She does not seem to want to be informed about her father's condition for various reasons (see section 3.7.2), the disease, however, is still a central theme in "The Light That Fell Behind Him". To be more precise, she thoroughly informs herself about the disease, reveals their family history of Alzheimer's, makes a final decision because of their alleged predisposition, and remembers incidences related to her father's illness from the past, when she visited him. The paper boy Stephen, who has always liked collecting the money for the newspaper from the McLean family, is shocked when Ambrose acts in a totally different way to former times and even shows aggressive behavior due to his disease (see section 3.7.4). Larry, the husband of Connie, Ambrose's and Peggy's foster daughter, has to deal with the consequences on their marital relationship because of Connie's affection and caring for Ambrose (see section 3.7.6). Therefore, Alzheimer's also plays a major role in his life. Gord, a nurse at the Health Centre where Ambrose stays at some point, is not only familiar with the disease and the symptoms it triggers, but also surrounded by it day by day (see section 3.7.7). Connie, the foster daughter of the McLeans, lives near Ambrose and helps Peggy care for him. She is very devoted to her foster father and hence struggles with gradually losing him due to Alzheimer's. She does not seem to be able to blank out her thoughts or feelings regarding her sick father at all in daily life (see section 3.7.8).

Interestingly, focus is put on the rather rare form of familial Alzheimer's, which is genetically inherited and typically develops before the age of 65 (see section 2.2.1.1). It seems that Ambrose's two sisters as well as his brother suffered from Alzheimer's disease (Sabatini, *News* 26-27). Thus, it is probable that Ambrose also had the genetic predisposition.

3.6.2 The Caregiver Burden

Another theme is the caregiver burden. It is not only described which tasks are involved in caretaking, but also the strain it puts on the carers. Nursing an Alzheimer's patient can deeply affect one's psyche. A caregiver can live through a range of emotions. On top of that it is even possible that the psychological stress leads to physical problems (see sections 3.7.1.2, 3.7.1.3, and 3.7.1.4).

In the beginning, Peggy takes care of Ambrose by herself. Connie supports her, however, she does not live in the same house and has her own obligations and, thus, cannot be available around the clock (Sabatini, *News* 68 and 105). When Ambrose has reached an advanced stage, Peggy receives help through home care (Sabatini, *News* 34). Nevertheless, caring for her sick husband poses a great burden to the woman. To be more precise, at first glance, Peggy seems to be very angry with God, as well as Ambrose's doctor, and Ambrose himself at different times during her husband's progression of the disease as she seems to need someone to blame for his condition as well as behavior. She is exposed to a great variety of emotions, such as loneliness, worry, exhaustion, fatigue, and grief, throughout Ambrose's disease (see section 3.7.1).

Obviously, it has to be borne in mind that the caregiver stress is not only present because an Alzheimer's sufferer needs help with all daily activities, but also, because he or she is not the same person anymore as he or she used to be before falling ill (see sections 2.1.2 and 2.1.3).

3.6.3 Family Life

The short stories mainly focus on the McLean family's experiences and struggles with Alzheimer's disease. However, the relationships between the individual family members are also highlighted.

Throughout the stories, the strong connection between Ambrose and his wife Peggy is revealed. Furthermore, Ambrose and his foster daughter Connie are very close (see sections 3.7.6.1, 3.7.8.1, 3.7.8.2, 3.7.9.1, 3.7.9.2, and 3.7.9.3). The relationship between Alice and her biological parents Ambrose and Peggy, which does not seem to be as strong, is also hinted at in section 3.7.2. When reading the short stories, it becomes obvious that all family members, except for Alice, play a part in each other's life every day. Alice is only referred to a few times in the other people's stories apart from the two incidences when Ambrose wonders where and who she is (Sabatini, *News* 55 and 56-57). For example, her foster sister Connie only thinks of Alice once on the way to Ambrose's funeral (Sabatini, *News* 111) and Peggy only thinks of her when remembering a small accident from Connie's and Alice's childhood (Sabatini, *News* 19). Moreover, the family seems to sit together at a table only one time throughout the whole book, namely when talking about Ambrose's future who has already been sick for a while at this point of the story (Sabatini, *News* 121-124).

Alice is not involved in their daily activities anymore and does not appear to want to change this fact. One can only speculate why their connection does not seem to be as strong. However, when considering the alleged reasons for Alice's behavior, namely that she wants to remember her father the way he was before he has become sick or that he represents her probably greatest fear of becoming an Alzheimer's patient herself one day (see section 3.7.2), it seems safe to argue that Alice is the one who has withdrawn from her family's life at first and as a result, her family has reacted in the same way.

As just-mentioned, Connie and her foster parents are very close. Especially Ambrose and Connie seem to cherish their strong connection. However, as Connie was adopted, one gets the impression that she fears not fully belonging to the McLean family. To support this point, the following statement outlines what Ambrose and Peggy say to her before she leaves for a weekend with Larry and his parents: "'Remember who you belong to.' Connie felt a brief thrill. She belonged to Ambrose and Peggy? Really? Finally? When they said, in unison, 'And I don't mean me', she breathed out. Of course. Belonging to the Lord was something she had grown used to. It ought not to be disappointing" (Sabatini, *News* 118). Connie's initial excitement of finally belonging to Ambrose and Peggy wore off fast when she realized that they talked about the Lord. It could be argued that it is very important for Connie to have a family and to feel a sense of belonging as she has been adopted and probably has never experienced living with a functioning family before she has met the McLeans (see section 3.7.8.1). However, when reading the short stories, it becomes obvious

that Connie must feel that she is part of the family, but it is possible that she wants her foster parents to say it out loud in order to receive a confirmation of her feelings.

3.7 Textual Analysis

"'Man is not destroyed by suffering; he is destroyed by suffering without meaning.'"
Viktor Frankl, 1962 – Neurologist, Psychiatrist, and Holocaust survivor[17]

In this section, the ways of dealing with the Alzheimer's patient of the family members and people living in the immediate surroundings will be considered. Each short story focuses on a different character's experiences. One story is even told from the point of view of the Alzheimer's patient himself. It needs to be stressed that only those passages of the book, which are relevant for the discussion, will be referred to. After that emphasis will be put on possible links and alleged connections between the short stories and the characters. Secondary literature will be used for emphasizing and supporting the arguments presented whenever possible and applicable.

3.7.1 "Clean Hands"

"Ambrose eats cubed beetroot and a lump of squash. He has eaten the custard, skin and all, and he has dipped his bread into his coffee and now cannot retrieve it. He looks at Peggy and says, 'You better believe it.' Peggy is ready to believe anything."[18]

As this excerpt from the first short story, a figural narrative[19], indicates, one learns about Ambrose's disease as well as his wife Peggy and her experiences with Alzheimer's.

[17] Frankl qtd. in Ashton and Ashton 58.
[18] Sabatini, *News* 9.
[19] "[I]n the figural narrative situation, the mediating narrator is replaced by a reflector: a character in the novel who thinks, feels and perceives, but does not speak to the reader like a narrator. The reader looks at the other characters of the narrative through the eyes of this reflector-character. Since nobody 'narrates' in this case, the presentation seems to be direct. Thus the distinguishing characteristic of the figural narrative situation is that the illusion of immediacy is superimposed over mediacy" (Stanzel 5).

3.7.1.1 The Beginning of the End

From the very beginning of the first short story, the reader immediately becomes aware of Ambrose's condition. While visiting Ambrose at the "Riverside Health Centre" (Sabatini, *News* 16), a nursing home, his wife Peggy remembers two crucial events, which directly hint at Ambrose's fatal disease. Both of them clearly illustrate his inability to fulfill daily, familiar tasks (see section 2.1.2), a disability that appears to have affected him suddenly and unexpectedly:

> Ambrose came out of the kitchen one night, *frowning***.** Everyone laughed because *he was carrying the toaster oven* and they thought he was going to use it as a prop for one of his famous jokes. […] But that night he looked at Peggy. *'I've forgotten how to make the tea.'* […] She got the tray and made the tea while Ambrose stood to one side, *watching as though for clues to a game of charades.* […] But Peggy *had known even before the toaster oven, long before Ambrose did.* […] Ambrose was an X-acto-knife-wielding terror with wallpaper, an insufferable, wall-paper-hanging perfectionist. […] But when Peggy came home and had a look down the hall, she thought that Ambrose must be having his own revenge […] by *mismatching her pattern, hanging the jade stripes at tangents to the pink roses. If Ambrose knew, he wasn't saying.* [emphasis added] (Sabatini, *News* 9-11)

One could assume that Ambrose himself cannot explain and is probably not even aware of the ongoing changes in his brain. In the first situation, he frowns while asking Peggy for help and then attentively watches her searching for answers for his unexpectedly unsuccessful attempt to cook tea. In the second situation, it is indicated that he is not capable of hanging the wallpaper properly, leaving Peggy wondering if he is able to notice the mismatched pattern at all.

However, after the incidence with the toaster oven, Ambrose himself seems to recognize that memory aids have become indispensible in his daily life (see section 2.1.2):

> After the problem with the toaster oven Ambrose started *carrying a notepad* on which he wrote his *name, address, and telephone number, as well as instructions for making tea*. They [his family] *joked* about his lists and about how he was finally going to succeed at doing errands that he had all his life disdained, but which he now took to with *enthusiasm,* if not *desperation.* The conquering of items on the list gave him *confidence* and so Peggy *ignored her fear,* watching the man who never wrote down anything before now sit at the table ticking off the moments of his day. [emphasis added] (Sabatini, *News* 13)

Ambrose's family as well as Ambrose himself seem to try to make the best out of the new situation, either laughing or even being excited about it. In this context, Nancy Mace and Peter Rabins explain that "[l]aughter might be called a gift to help us keep our sanity in the

face of trouble" (213). They further emphasize that one does neither have to feel ashamed, nor sorry for this reaction (Mace and Rabins 213). Even Peggy brushes aside the scary feelings that have come to the fore with Ambrose's changing memory, as the notepad seems to provide him with self-assurance. Buffum and Brod have extensively studied the connection between humor and well-being, regarding spousal caregiving of people suffering from Alzheimer's (cf. Buffum and Brod). They have arrived at the conclusion that among others, humor and well-being have a positive correlation. Conversely, they have found out that the stage the Alzheimer's patient is in also has an impact on the caregiver's sense of humor, namely the further the disease is advanced, the fewer jokes are made with regard to the patient's condition (Buffum and Brod 14).

Soon after these incidences, Peggy seems to become more and more aware of the severity of her husband's condition:

> *'Why* are you *withdrawing four hundred dollars?*' Ambrose looked at her, his expression *contemptuous,* Peggy blinked and *could not speak.* He said carefully, enunciating consonants with the precision that comes from disgust, 'I am withdrawing four hundred dollars because I want to have coffee with my friend, Alexander Baines.' Ambrose suddenly heard the sound of his voice and *laughed.* They *blessed that laughter* for days. Weeks later it became a *matter of routine* for Peggy to take his *wallet* when he wasn't looking and *remove the hundreds of dollars* there which he would otherwise be trying to give to the Second Cup lady for a mug of Colombian Supremo. [emphasis added] (Sabatini, *News* 13-14)

This excerpt shows that Ambrose's condition worsens gradually in the course of time. He cannot handle money anymore and his wife has to control his expenses. Additionally, one could argue that this passage reveals that Ambrose's mood has changed and that laughing will soon belong to the past. This, in turn, could also be an indication for depression, which is very common in Alzheimer's patients (see section 2.1.2).

Peggy accompanies her husband to the doctor on a regular basis as he suffers from diabetes. As stated in section 2.2.9, diabetes is believed to pose a great risk for Alzheimer's disease. Hence, it could be presumed that diabetes is one reason for Ambrose's condition. However, although the physician observes a change in Ambrose's personality during one check-up, he does not attribute the patient's inappropriate behavior to a disease, but rather to

personal differences between Ambrose and his wife:

> When she started to come with him for his regular *diabetes* check-ups, Dr Fortuna paid more attention. He noticed that Ambrose had become *sullen to the point of rudeness* in his exchanges with Peggy. At times he even told her to *shut up* or he'd *shut her up himself.* She said that she couldn't just tell Ambrose he had an appointment to see the doctor, rather she had to invite him out for ice cream and *hope to trick him* through the doors and up the stairs. Dr Fortuna *laughed at Ambrose's recalcitrance,* which he was prepared to attribute to perhaps a rough spot in the marriage. The patient's health indicators were acceptable; Dr Fortuna *didn't pry.* [emphasis added] (Sabatini, *News* 16)

This passage highlights the ongoing progression of Ambrose's disease. One could argue that he no longer wants to attend his appointments as leaving his familiar surrounding seems to put him under too much stress (see section 2.1.2). Therefore, Peggy has to invent other reasons for their visits to his physician. Furthermore, the personal interaction between the married couple becomes increasingly rough (see section 2.1.3).

3.7.1.2 Anger

One encounters several situations in the book in which Peggy does not only seem to question her faith in God, but also becomes angry with him, which is exemplified in the next four excerpts. Mace and Rabins explain that

> [p]eople with a religious faith may question how God could allow this to happen to them. They may feel that it is a terrible sin to be angry with God or they may fear that they have lost their faith. Such feelings may deprive them of the strength and reassurance faith offers at just the time when they need it most. To struggle with such questions is part of the experience of faith. (208)

> *Through many dangers, toils, and snares*
> *I have already come.*
> *'Tis grace hath brought me safe thus far,*
> *And grace will lead me home.*
>
> These days she might question what it means to be brought safe this far but she knows about the dangers, toils, and snares. [emphasis added] (Sabatini, *News* 12-13)

Here Peggy thinks of a passage from the song "'Amazing Grace'" (Sabatini, *News* 12). One could argue that by stressing that the woman may "question what it means to be brought safe this far" (Sabatini, *News* 13) after she has learned about her husband's condition and that she is familiar with bad occurrences in life, that she has already suffered before. Hence, it could not only be assumed that in comparison to other events in her life, she has never encountered a worse one, but also that she has never questioned the reason for them until this point:

"Peggy listens to Maxine [who also stays at the Health Centre]. Trust in the Lord. She used to *trust unthinkingly.* Now she feels *she is hanging on by her fingernails* and *takes some comfort* in the words of the Apostle to Christ" [emphasis added] (Sabatini, *News* 21). It could be argued that Ambrose's condition makes her realize that she used to trust blindly in God and his actions. However, the reason why she still "takes some comfort in the words of the Apostle to Christ" (Sabatini, *News* 21) might be because she secretly hopes that the current situation will not become worse than it already is. Further indications for this assumption that she prays because she fears the worsening of the situation rather than because she tries to gain strength, can be found in the upcoming two extracts in the next paragraph.

"It was *outrageous* that she should have to live like this, that something could wreck what had been so carefully built and tended. She wanted *mercy.* She wanted her prayers answered, *her will, not God's done,* now" [emphasis added] (Sabatini, *News* 20-21). One could assume that she thinks that it was God's action and that she blames him for Ambrose's current condition leading to her angry feelings towards God. It seems that she desperately tries to find an answer for the reason why this has happened to her. With highlighting that Peggy would like to have mercy, it could be indicated that she believes that she is being punished. In the following excerpt, it could be additionally suggested that Peggy does not only try to answer why they are in this situation, but also questions her religious belief in general: "Peggy thinks he will probably have a few more scars before he's *carried out* of here [nursing home]. *To what?"* [emphasis added] (Sabatini, *News* 20). With asking herself "[t]o what?" (Sabatini, *News* 20) he will be carried out of the nursing home after his death, it could be presumed that she also doubts her previous view on the afterlife.

It is obvious that Peggy makes use of religion as a coping mechanism, which is referred to "as the sacred cognitive, emotional, behavioral, and relational pathway used in the search for significance under times of stress" (Heo 370). However, according to Grace Heo, it needs to be differentiated between two coping strategies in this context, namely positive religious coping and negative religious coping (Heo 370). Whereas the former "indicates a sense of spirituality, a secure relationship with a benevolent God, a belief that there is meaning in life, and a sense of spiritual connection with others" (Heo 370), the latter "has been defined as a set of strategies that include attribution of situations to a punishing God and feelings of abandonment by God" (Heo 370). In addition, negative religious coping "includes an expression of a less secure relationship with God, a tenuous and pessimistic view of the world, and a religious struggle in the search for significance" (Heo 370). When

taking another close look at the paragraph above, it could be argued that the woman's religious coping strategy is the negative one as she seems to think that God is punishing her and, therefore, questions God's putative decision and her religious belief in general. Interestingly, as has been found out, among others, by Koenig, Pargament, and Nielsen as well as Siegel and Schrimshaw (cf. Koenig, Pargament, and Nielsen and Siegel and Schrimshaw), there is a connection between a greater usage of negative religious coping mechanisms and difficulties with problem solving, psychological distress, low quality of life as well as low physical health and mortality (Heo 370).

However, Peggy does not only seem to be angry with God, which is illustrated in the next passage. One day the woman decides to see the doctor without her husband:

> Peggy came *on her own* one afternoon. She explained that she had left Ambrose with her daughter, that she could *no longer leave him alone* in the house because he would *accuse her* of having an affair if she was gone more than fifteen minutes. Or he would have every pot in the house filled with water, set on the stove and all the heat registers, *trying* to find a way *to make tea.* She had so far managed to intervene before any disaster could occur. Then she lifted her blond hair form her forehead to show Dr Fortuna the *purple swelling.* It was a *nasty bump* caused, she said, when *Ambrose was angry with her* for *locking the door* when he wanted to *go out in his underwear.* She was clearly *exhausted* and could *no longer cope on her own,* she said, with Ambrose's problem. She *needed some help* and wanted to have Ambrose referred to a *specialist.* Before she started *hitting back.* […] She learned to dodge bullets, to find her perimeters every day. Dr Fortuna's notion of comfort was *feeble.* He told Peggy not to take it too hard, that everyone has to die of something. [emphasis added] (Sabatini, *News* 16-17)

This short extract from the short story does not only point out further symptoms Alzheimer's patients can develop such as suspicion, being inappropriately dressed, and aggressive behavior and that they have to be supervised and cannot be left home alone anymore at some point (see section 2.1.2), but also the family members' feelings of helplessness and anger. In this context, Mace and Rabins point out that many family members have feelings of helplessness, weakness, or demoralization, which can even grow if one does not know a *dementia* care specialist who is familiar with the disease's burden (210). Even anger towards doctors can be experienced by caregivers (Mace and Rabins 208). Therefore, one could assume that Peggy additionally feels angry with Dr. Fortuna who does not seem to be a specialist and hence does not seem to be fully aware of what the disease means for Ambrose and for her. Susan Tebb and Pauline Jivanjee have suggested an ecological model of caregiver isolation's dimensions (cf. Tebb and Jivanjee). They explain that "[a]t the environmental level, caregiver isolation is exacerbated when physicians lack knowledge of Alzheimer's disease or caregivers' needs" (Tebb and Jivanjee 60). To be more specific, is

has been found out that "[c]aregivers reported that professionals' lack of understanding isolated them from the support they need at the time of diagnosis" (Tebb and Jivanjee 60) and that "[o]ne caregiver reported that she took the initiative in suggesting the possibility of Alzheimer's disease to the physician" (Tebb and Jivanjee 60) and [a]nother caregiver described her helplessness and the physician's lack of concern about the impact of her husband's illness on her" (Tebb and Jivanjee 60). As far as Peggy's and her physician's relationship is now concerned, it seems safe to argue that all of these statements apply to Peggy too. She also seems to experience even greater caregiver isolation because Dr. Fortuna does not seem to be an Alzheimer's specialist, which in turn supports the previous assumption that he neither seems to be familiar with the disease's symptoms and progression, nor the carer's burden leading to the woman's feelings of helplessness and anger towards the doctor.

It is also stressed in the excerpt that Peggy longed for help "[b]efore she started hitting back" (Sabatini, *News* 17). This could indicate that she is also angry with her husband, also hinted at in the next passage:

> 'Do you *hate me,* Ambrose? Do you *not love me* any more?' When it seemed to Peggy that she spent whole days crying she would ask him this. 'Don't be stupid', he'd say. 'Get up. What're you doing on the floor?' *She wanted to hit him.* She wanted to walk out of the house and *let him set fire to it, or himself, or the neighbour's cat* while he tried to plug the beast's tail into the wall socket and boil it for tea. [emphasis added] (Sabatini, *News* 20)

When Ambrose or rather his disease gives her a hard time, Peggy is not only sad and cries, but also gets angry with him. In these situations, cruel and especially violent thoughts seem to occupy her. According to Mace and Rabins, anger is an emotion which is commonly felt by people taking care of *dementia* patients and that it means that the person has to receive support (218). Mace and Rabins emphasize that "[c]aregiving is difficult and frustration is understandable: caregivers endure overwhelming burdens" (218). In this context, the concept of caregiver burden comes to the fore. Evridiki Papastavrou et al. explain that "[c]aregiver burden has been defined as a negative reaction to the impact of providing care on caregivers' social, occupational and personal roles" (446). Whereas the symptoms of *dementia* enormously impact the burden and stress of a carer, the caregiver's burden and stress are said to be determining factors in institutionalizing a *dementia* patient (Papastavrou et al. 446), which has been investigated by Donaldson, Tarrier, and Burns (cf. Donaldson, Tarrier, and Burns). Additionally, it has been suggested that there is a link between a *dementia* caregiver's chronic stress experience and his/her lower physical health, psychiatric

morbidity, and lower quality of life (Papastavrou et al. 446-447). Studies dealing with this relationship have been conducted by Rose-Rego, Strauss, and Smyth, Clyburn et al., Bell, Araki, and Neumann, and Connell, Janevic, and Gallant (cf. Rose-Rego, Strauss, and Smyth, Clyburn et al., Bell, Araki, and Neumann, and Connell, Janevic, and Gallant). Consequently, as Papastavrou stresses, "[a]ll these factors may result in poor standards of care, neglect or even abuse of the patient, and indicate the need for patient institutionalization" (447). Although Peggy develops violent thoughts when Ambrose treats her badly because of his disease, presumably resulting out of the burden and stress she seems to experience, she does neither seem to poorly care for her husband, nor abuse or neglect him. However, they could mean that the woman can no longer bear to take care of her husband, either by herself or at home in general.

However, when reading the following part of the short story, it becomes obvious that she is not angry with God, Ambrose's doctor, and Ambrose himself:

> She would get up, rub the darkening bruise and say again, a mantra from which no serenity came, *'This is the disease, this is not my Ambrose.'* […] For Peggy, the *bib* is the quintessence of the institution and the disease. She would like to *tear it off* and *rip it* with her *teeth* and *nails* and *stomp on it, burn it, sift it out of the ash* and *spit on it.* [emphasis added] (Sabatini, *News* 21-22)

Peggy is angry at the disease. It could be argued that the woman transfers the anger at the disease and hence blames God, the doctor, and even her husband as she seems to need someone to be made responsible for this situation, which might help her cope better with these circumstances.

3.7.1.3 The Next Stage

Ambrose's condition gets worse over the course of time making it even more difficult for Peggy to deal with:

> [T]he ones [days] that sent him here [nursing home], had their own *sickening* protocol. When Peggy's feeling *sorry* for Ambrose, *she makes herself remember* the time she tried to show him how to open the front door. She remembers his face close to hers, blurring at the edge of white pain. His voice whining in the air above her, above the white pain blasting through her head against the jamb. She makes herself remember trying to drag breath past the swelling vomit in her throat. [emphasis added] (Sabatini, *News* 13)

Ambrose starts showing more aggressive behavior towards his wife. When he is not able to open the door, which suggests that the disease is already far advanced (see section 2.1.3), he gets angry and physically hurts her again. Therefore, the inevitable happens and Ambrose is placed in a nursing home. It could be argued that the reason why Peggy recalls this horrible moment is not only, because she is sorry, but also because she feels guilty for sending Ambrose to a nursing home and not taking care of him at home anymore and hence tries to justify her decision. According to Mace and Rabins, lots of families are caught in the dilemma of feeling guilty for only thinking about putting a loved one in a nursing home (210-211). They add that "[t]he trouble with feelings of guilt is that, when they are not recognized for what they are, they can keep you from making clear-headed decisions about the future and doing what is right for the person with dementia and the rest of the family" (Mace and Rabins 211). A study focusing on the experiences and feelings of family carers of Alzheimer's patients after their institutionalization has been carried out by Garity, who has come to the conclusion that among others, feeling guilty because of sending a loved one to a nursing home, has a negative impact on the family carer's coping with this burden afterwards (cf. Garity).

Despite pointing out the further progression of the disease and stressing that Ambrose cannot do daily tasks anymore by himself and that he has hallucinations (see section 2.1.2), the upcoming passage also reveals that Peggy is aware of the fact that it is not her who Ambrose despises, but himself or rather the disease from which he is suffering. Nevertheless, she seems to be carried away by her feelings once in a while, as she also knows that she should not be blamed for this condition at all. In addition, studies have shown that if patients suffer from hallucinations, agitation, depression, cognitive impairment, insomnia, or wandering, carers likelier feel stressed and depressed (Vellone et al. 223). As almost all of these conditions apply to Ambrose, exemplified throughout this section, they could serve as further explanation why his wife seems annoyed sometimes. More information on this relationship is provided by Donaldson, Tarrier, and Burns and Takahashi, Tanaka, and Miyaoka (cf. Donaldson, Tarrier, and Burns and Takahashi, Tanaka, and Miyaoka).

> He *hated needing* her to *help* him to the *bathroom;* he hated her for trying to put the Depends on or change soiled sheets or brush his yellowed teeth. She knew it was *himself he hated.* But it *wasn't her fault.* She got so tired of *covering up* the *invisible lady* all dressed in black that Ambrose would see at the end of the couch. [emphasis added] (Sabatini, *News* 21)

At the nursing home, the disease continues to spread. For example, Ambrose has a sudden loss of interest in activities he used to enjoy (Sabatini, *News* 16) and he cannot find his personal belongings anymore after he has most probably hidden them himself (Sabatini, *News* 18), which are common behaviors in Alzheimer's patients (see section 2.1.2). In addition, he also has a fall, which could mean that his muscles are getting weaker (Sabatini, *News* 18).

Moreover, the reader is made aware that Ambrose's mood changes. It is pointed out that when Peggy tries to remind him of wonderful events of their life, he reacts the following way: "On *bad days* he gives her a *shove that bruises her arm* but on *good days* he *lets her take his hand* and *give him a small kiss"* [emphasis added] (Sabatini, *News* 14). One could argue that as a family member of a *dementia* patient, one can never know with certainty how this person reacts in various situations, which in turn puts another great strain on the caregiver. However, not only does the Alzheimer's patient show his affection once in a while despite having arrived in a later stage, but also sometimes even articulates his feelings for his wife: "*'I'm so sorry,* Peggy.' The brief slip into sense is breathtaking. 'I'm such a stupid old boy, aren't I. *But I love you.* Don't forget.'" [emphasis added] (Sabatini, *News* 22). Mace and Rabins explain that "[p]eople with dementia have good days and bad days" (43), which is clearly illustrated in these two passages.

3.7.1.4 Ups and Downs

Not only does Ambrose have his ups and downs, but also Peggy lives through good and bad times during the disease's progression, which are characterized by changes in emotions ranging from grief, loneliness, and worry to exhaustion and fatigue. In this context, Mace and Rabins stress that grief, anger, worry, or fatigue are often intermingled with depression (215 and 218). They further emphasize that "[a] chronic illness takes its toll on our emotions" (Mace and Rabins 215).

After she has taken out Ambrose for coffee and learns about his further deterioration (Sabatini, *News* 18), Peggy seems to grieve. Macy and Rabins explain that "grief is a natural emotional response to loss and so is a normal experience for people who love a person with a chronic illness. […] [G]rief is a feeling associated with losing those qualities of a person who was important to you" (214). Moreover, they add that grief in connection with *dementia* seems to continue endlessly (Mace and Rabins 214). By means of example: "Peggy *cried quietly* in her bed that night, although she had no one to disturb. Her mother used to say

about most things that happened in life, ‘Ach well, there’ve been greater losses at sea. Just gie yersel a shake, lassie, and go sweeper the carpet.’” [emphasis added] (Sabatini, *News* 18). Peggy thoroughly cleaned the carpet and even made use of the carpet beater before she goes to bed, meanwhile thinking “‘Filthy! Absolutely filthy. And folk think they’re clean. How could anything be so disgusting?’” (Sabatini, *News* 19). It could be assumed that Peggy transfers the dreadful disease and its symptoms to the dirty carpet while trying to get it clean. In other words, the dirt on the carpet could stand for Alzheimer’s and how it affects Ambrose and her and how it pollutes his mind and personality. It is not the carpet, which disgusts her, but the disease itself. Hence, it could also be argued that beating the carpet is not only a way for her to blow off steam, which has accumulated over the course of time, but she might also unconsciously try to beat Alzheimer’s and make the symptoms vanish.

Since Ambrose has been sick, friends have reacted to Ambrose’s condition in the following way: “Peggy wants to go out for lunch to the place downtown that still believes in linen, and she wants to go with a friend who *isn’t trying to be sad.* Because of what she calls her ‘situation’, because of Ambrose, most of her friends *only offer her well-intentioned pity”* [emphasis added] (Sabatini, *News* 19). These passages indicate that her friends do not and cannot fully understand the situation she is in and instead of accepting their pity, Peggy would prefer to put Ambrose’s disease at the back of her mind for at least a few hours and hence be not reminded of it constantly. In addition, this hints at Peggy’s loneliness, as she does not seem to have a friend who reacts differently when seeing Peggy and, thus, she seems to have no one to accompany her, which becomes even more obvious in the next paragraph.

Peggy must have a lot to worry about, which is clearly illustrated in the next excerpt: “Peggy’s *worry about money* has fallen to the *bottom of the list*” [emphasis added] (Sabatini, *News* 20). It is also pointed out that Peggy used to care a lot about money and the family’s expenses (Sabatini, *News* 20). Obviously, Peggy feels that worrying about money has lost its significance and, thus, has started to play a minor role in her life after she had learned about her husband’s condition. With further stressing that “[s]he would like to go to that [very fancy] restaurant” (Sabatini, *News* 20), it could be implied that Peggy realizes at this point that there might be a time when she will not be able to do that anymore regarding her husband’s disease. However, she cannot think of anyone who would like to join her at the restaurant and, therefore, she would have to bring a book with her (Sabatini, *News* 20). She does not seem to like this idea because “[s]he would have to *pretend* that she is still *able to read, to concentrate* on anything but the hazards of the next moment. Far too exhausting.

And, to her mind, pathetic" [emphasis added] (Sabatini, *News* 20). Peggy's feeling of loneliness becomes even clearer in this context. This passage and the next one additionally suggest that Peggy is exhausted and that she barely has the strength to go on: "Although Peggy was certain such [loving] moments had occurred in her marriage, moments that made her smile, made her know herself as, of all things, desirable, *she could no longer easily remember them"* [emphasis added] (Sabatini, *News* 21). It seems to be a challenge for Peggy to hold on to the great memories from the past any longer, while being confronted with the dreadful present, which in turn could indicate that Peggy suffers from fatigue.

A study investigating grief experiences in Alzheimer's carers has been carried out by Sanders et al. (cf. Sanders et al.). Sara Sanders et al. explain that "[t]he experiences of these caregivers with high levels of grief included feelings of yearning for the past, regret and guilt, isolation, restricted freedom, other life stressors, and difficulties with formal caregiving systems" (517). In this context, one could argue that Peggy shares the experiences with the people who participated in the study apart from the other life stressors as one does not learn more about Peggy's health condition, financial situation, etc. (Sanders et al. 511). However, Peggy seems to long for the past (Sanders et al. 517), which is not only indicated in this section by stressing that she would like to go shopping or to a restaurant, like she used to with friends or her husband (Sabatini, *News* 19-20), but also in section 3.7.3.2 by revealing Peggy's alleged unconscious desires that she would like her husband to be the same way as he used to be, loving and supporting (Sabatini, *News* 35). Furthermore, Peggy seems to feel guilty (Sanders et al. 517) after having admitted Ambrose to a nursing home (Sabatini, *News* 13), which has been dealt with in section 3.7.1.3. On top of that she also seems to be affected by isolation (Sanders et al. 517), discussed in this section, because she does not seem to spend time with her friends anymore (Sabatini, *News* 19-20). One could also assume that she feels that her freedom is restricted (Sanders et al. 517) as her whole life seems to center around her sick husband pointed out throughout this short story. On top of that the woman also seems to fear that the nurses treat her husband inappropriately (Sabatini, *News* 20). This, in turn, could highlight Peggy's problems with the public caregiving system (Sanders et al. 517).

3.7.2 "The Light That Fell Behind Him"

"Alice had left town by the time Ambrose began the frightening process of losing his own narrative."[20]

This short story, a figural narrative[21], is about Alice, Ambrose's and Peggy's biological daughter, who, as the excerpt above indicates, has moved away from home when Ambrose's condition worsened to the point where he started to forget his own past.

3.7.2.1 Coping Strategies

Alice lives farther away from her parents with her boyfriend or husband (Sabatini, *News* 28). She is studying to become a pediatrics doctor (Sabatini, *News* 34). From the beginning of this short story, one learns about Alice's way of dealing with her father's disease. The young woman does not seem to want to be informed about the deteriorating process of her father's Alzheimer's disease:

> Pinched between her finger and thumb, *Alice's mother's letter* dangles above the kitchen table. Alice drops it there with the *unopened collection.* The stack of letters sits beside her health card and the pre-admission form. She thinks she might take them with her to the hospital when she goes on Friday because she would hate to die under anaesthetic and have *her mother find out she didn't even read the lines,* never mind what was between them. For now *she won't read these words about Ambrose.* […] *She'd rather read words written by people she's never met* for whom the knots are only very interesting. […] For months, she has been *compiling research* for a paper that will never be given, formulating conclusions for a diagnosis that will never be delivered, becoming a *secret expert.* [emphasis added] (Sabatini, *News* 23)

Primarily, this passage reveals that Alice does not keep track of her parents' life and her father's progression of the disease and that she prefers reading scientific papers on Alzheimer's disease instead of her mother's letters. When looking at this excerpt, at this point of the story, one could interpret Alice's decision to try to block out her parents' struggle as a coldhearted and harsh way of dealing with the fatal disease of her father because it seems that she does not want to know what is happening at home at all. However, since it is also emphasized that she does not want "her mother [to] find out she didn't even

[20] Sabatini, *News* 28.
[21] See Stanzel in section 3.7.1.

read the lines" (Sabatini, *News* 23), she probably feels guilty for acting this way and, thus, it becomes obvious that there must be more behind Alice's behavior (see section 3.7.2.3).

In addition, it is not only pointed out that Alice will have surgery soon, but also that she is highly interested in Alzheimer's and is in the middle of gaining deeper knowledge of the disease. It is not until later in the story that one learns about Alice's surgery, a tubal legation (Sabatini, *News* 31), and most probably the main reason for her great interest in Alzheimer's disease, namely that it seems to run in their family. Ambrose's two older sisters and his brother also seem to have suffered from this fatal disease (Sabatini, *News* 26-27). Thus, it can be safely argued that Ambrose as well as his siblings inherited the familial form of the disease from their mother or father and Alice will most likely suffer from it as well later in life (see section 2.2.1.1). On top of that the young woman witnessed her relatives' condition worsen over the course of time (Sabatini, *News* 26-27). Hence, it is possible that witnessing the deterioration process of her relatives has also had an impact on her decision.

One could assume now that her decisions to undergo surgery and to study Alzheimer's are deeply connected with each other. To be more specific, as displayed in the next two examples, it seems that Alice tries to justify the upcoming surgery herself, which will prevent her from having children in the future, with thoroughly informing herself about Alzheimer's and its fatal course: "When she leaves [for hospital], she'll take this book with her. It will help her make sure" (Sabatini, *News* 27) and "[h]er textbooks allow Alice to keep her distance. Her surgery will terminate the succession of the disease in her family. It's a good decision. A certain one. Alice is sure she is right" (Sabatini, *News* 32-33). It could be presumed that she reads scientific papers on the disease in order to conceal her emotions. She seems to desperately try to think rationally only as far as the sterilization is concerned, and not let her feelings take advantage of her. When reading the sentence "[h]er surgery will terminate the succession of the disease in her family" (Sabatini, *News* 32), one does not only learn about her alleged intention to undergo surgery, but it also becomes obvious that this could be another way for Alice of dealing with her family's history of this fatal disease.

In this context, Bruce Carpenter's book *Personal Coping: Theory, Research, and Application* sheds more light on the coping process and models (cf. Carpenter).

3.7.2.2 The Unconscious

Throughout the book, one becomes more and more aware of Alice's alleged worries and fears and how they seem to dominate her life. In this context, Lenore Powell and Katie

Courtice explain that "everyone close to victims of Alzheimer's disease must wrestle with fears. Often these anxieties remain unspoken; sometimes people don't even recognize them in their minds. This is especially true of the fear that one might develop Alzheimer's disease onself, a fear that doesn't usually surface until the patient is in the late stages of the illness" (130). They add that "[f]ear is a stressor, a killer that not only inhibits life but detracts from one's ability to live. In and of itself, fear can debilitate the human psyche and produce physical, mental, and emotional symptomatology that can lead to physical and emotional illness" (Powell and Courtice 136). By means of example:

> She's not getting much sleep; she never eats properly. She lies easily when Peggy asks her these mother-questions. […] She likes Peggy to believe that she has a routine, that she thinks about things like watching her weight and saving her money for a vacation and *not extra insurance, a lucrative pension for a life* she's confident will end *in a nursing home* of some kind. She's making sure it will be a good one. She *doesn't talk about Tom.* She *doesn't talk about the books she's reading these days.* [emphasis added] (Sabatini, *News* 30)

Alice seems to have troubles sleeping and is not eating on a regular basis. Moreover, she is not honest with her mother Peggy. The reason for this behavior seems to be her concern of becoming an Alzheimer's patient herself one day and in sharing her fear of what the future may hold for her. In other words, Alice is certain that she "will end in a nursing home of some kind" (Sabatini, *News* 30) and apart from fearing this day, she also does not seem to want to discuss her probable future with her mother. One could argue now that she either tries to protect Peggy from her own worries as Alice knows that she has her own issues to handle or that she does not want to address her problems because she tries to avoid them. However, the latter could serve as an explanation why Alice cannot sleep and why she does not eat regularly. It could be assumed that through suppressing her deep concerns, her whole life is affected, which becomes even more obvious, when reading the next passage: "[S]he wakes up in the night paralysed, having dreamt about the future" (Sabatini, *News* 34). The young woman has nightmares about suffering from Alzheimer's disease one day. In other words, the reason for having disturbing dreams could be that she ignores her fear of suffering from this ultimately fatal disease later in life, which seems to be prevalent throughout every day and accompany her permanently (Sabatini, *News* 34), and does not try to overcome it.

However, it is also emphasized that "Alice believes that sleep will come more easily" once the surgical procedure is over (Sabatini, *News* 30), which could indicate that the young woman thinks that this will positively influence her current state of health. When reading the

following statement, one does not only find out more about her probable intention for this procedure, but also about another fear which seems to possess her: “There may be only a small chance that a child of hers would get Alzheimer’s but she prefers there to be no chance, even if it means no child” (Sabatini, *News* 33). It could be argued now that Alice will have a tubal ligation because she does not want her future children to suffer from Alzheimer’s disease one day or/and because she does not want them to feel the way she seems to, namely guilty for not being there for her father (see section 3.7.2.3). Since Alice will become a pediatrics doctor, it could be presumed that she is fond of children and that her decision of not having offspring one day has not only been very difficult, but also impacts her psychologically and physiologically leading to her sleeping and eating problems.

In addition, the previous passage also displays that she avoids discussing her boyfriend/husband Tom with her mother. An explanation for this could be that she tries to put her relationship with Tom at the back of her mind as he has also not been informed about Alice’s surgery: “She’s told Tom she’s going to her mother’s for a couple of days […] He seems determined to hang around, smiling at arm’s length” (Sabatini, *News* 30-31). Instead of discussing or even telling Tom about her major decision, Alice has decided to keep him in the dark about the upcoming surgical procedure, which could seriously influence their relationship. To be more specific, it could be argued that it also affects him to a certain extent because although the reader is not informed about his opinion on children, it could be possible that he hopes to become a father one day. One could presume that Alice behaves this way because she fears his reaction, which becomes even clearer in the next excerpt: “Alice wonders if maybe his father has Alzheimer’s disease and if Tom is maybe having a vasectomy on Friday. That would be rich” (Sabatini, *News* 31). With imagining that Tom’s father also suffers from this fatal disease and that Tom will have surgery as well, it could be indicated that Alice thinks that he would otherwise not understand her decision, which in turn could serve as an explanation for not confessing to him. It is highly possible that lying to Tom is also closely connected with her sleeping and eating problems.

3.7.2.3 Praying for the End

When reading the following passage, one gets the impression that Alice has already bid farewell to her father: “Alice hasn’t seen him for months. *Seeing her father makes her cry more* than not seeing him does. […] She stays alone on the east coast, her period of

residency in paediatrics almost over. She doesn't think she'll move back, though *she misses her mother"* [emphasis added] (Sabatini, *News* 34). With emphasizing that it has been a long time since she has visited her father and that she seems to solely miss her mother, it could be argued that Alice has already taken leave of her father before his condition worsened and he lost most of his personality. She seems to be aware of the fact that Alzheimer's patients are not the same person one used to know and love anymore (see section 2.1.2). Alice might want to remember her father the way he was before having developed the terrible symptoms of the disease. It is also likely that she does not want to see him anymore because her father's condition represents her allegedly greatest fear, namely ending up in the same situation her father is in now. Powell's and Courtice's statement supports this claim:

> It is very important to recognize the anxieties brought on by Alzheimer's disease. Otherwise, your mind can unconsciously protect itself by shielding you from the trigger of those anxieties, the patient. Fears can first become manifest when friends and relatives neglect to visit the patient. […] It is important to deal with your fears, to do as much as you reasonably can to alleviate them, and to move on – both for the patient and for yourself. (130)

Furthermore, there could be two explanations as to why "[s]eeing her father makes her cry more than not seeing him does" (Sabatini, *News* 34). Obviously, it could indicate that Alice feels guilty for not caring for her father, which is also indirectly pointed out in another passage: "Alice believes she can be forgiven for staying away, for keeping her father behind a particular door" (Sabatini, *News* 32). She seems to think that her behavior towards her father is inappropriate and hence could have a bad conscience, which is additionally suggested in another part of the story, when Alice imagines how he is and what he is thinking (Sabatini, *News* 28-30). Imagining Ambrose's condition could serve as another indication that Alice feels guilty about keeping her distance from her father as it could mean that she has not come to terms with her way of dealing with her father's situation. Next to that one could presume that she has pity on him because of his condition and, thus, cries even more when she visits her sick father. In this context, Mace and Rabins stress that "[i]n the beginning, it can be more difficult to accept the severity of a person's limitations if you see the person infrequently. Later, the shock of seeing how a person has declined can be heartbreaking" (198). The assumption that she cries a lot when she sees him because she feels sympathetic for Ambrose becomes even clearer in the next excerpt: "[S]he waits for Ambrose to get pneumonia or cancer or an aneurysm. She waits for God to remember a mercy He used to dispense with more prodigality" (Sabatini, *News* 34). Alice prays for Ambrose's release. Therefore, it could be argued that due to the reason that Alice feels sorry

for her father having to suffer greatly, she hopes for him that he will be released from this horrible disease soon, which in turn could serve as another explanation for the previous assumption why Alice has already said goodbye to her father.

3.7.3 "Ambrose Dreams"

"When Ambrose dreams he moans and winks and twitches like a Labrador retriever dreaming of plump rabbits."[22]

In this short story, a figural narrative[23], Ambrose's as well as Peggy's dreams are revealed. Especially getting an impression of Ambrose's alleged unconscious thoughts is highly interesting, as no one knows for certain what goes on in an Alzheimer's patient mind.

3.7.3.1 Ambrose

As pointed out by Sigmund Freud, neurologist, founder of psychoanalysis, "[p]roperly speaking, the unconscious is the real psychic; its inner nature is just as unknown to us as the reality of the external world, and it is just as imperfectly reported to us through the data of consciousness as is the external world through the indications of our sensory organs" (*Psychology,* 132). Various dreams of Ambrose are described in the book. The first one seems to reflect his very own thoughts on the disease:

> Ambrose dreams that he's being lifted out of murky, moving water and left on a broad bank of clipped grass that pricks his wet skin. He feels the water and muck leaking from his shoes and clothes, the sediment, twigs, leaves, and tadpoles from the river dribbling back down the bank to its source. He is rescued and brought to a broad place. He feels the breeze and knows his name. (Sabatini, *News* 35)

One could argue that Ambrose transfers his fear of dying from the disease to his fear of drowning in the dream. In other words, his near drowning experience could stand for how he feels day by day. Alzheimer's patients need help with their daily tasks at some point (see section 2.1.3) and even if they receive support, it is likely that they are overwhelmed. Thus, it could be presumed that Ambrose feels that he drowns every single day, not literally, but in the sense of failing to manage tasks himself. Furthermore, it is pointed out in the excerpt that

[22] Sabatini, *News* 35.
[23] See Stanzel in section 3.7.1.

Ambrose can think of his name after he has been saved in his dream, which could serve as further support of the assumption that the patient is also exposed to the feeling of drowning while being awake as this could indicate that he either fears forgetting his own name or that he has already forgotten it in reality.

In his dream, Ambrose is saved. At first glance, it is likely that the person who rescues him in his dream is Peggy, who, at this point of the story, still takes care of him at home and hence could be thought of as his savior. However, Ambrose's other dreams reveal the opposite:

> In his dreams he knows who she is; she is his enemy. She has robbed him of his car keys, of his money, of his claim checks for film processing. She puts poison in his food. She scratches him with her nails. She screams at him. When Peggy cries in Ambrose's dreams he knows why and he's glad. When Peggy cries in Ambrose's life, he doesn't know why. He doesn't know why she is a persistent force in his life. She keeps turning up, putting clothing on him, putting her lips to his face in a way that is utterly repugnant. She has, whoever she is, no sense of dignity or restraint. (Sabatini, *News* 41)

This passage displays that Ambrose believes that Peggy wants to physically and psychically hurt him. Although he might not be able to recognize his wife anymore and understand her actions at all while being awake, it seems that in his dreams he assigns her the role of the enemy. One could argue that Alzheimer's patients cannot understand why they are suddenly not allowed to drive a car and handle their own money. They might have delusions that someone tries to seriously harm them (see section 2.1.2). However, the only explanation as to why Ambrose seems to only feel this way about Peggy in his dreams could be that he unconsciously is angry with her, which solely comes to the fore in his dreams because of his disease.

Ambrose also dreams about his past. To be more specific, he lives through the time he spent at a hospital during the war and experiences hands in his dream (Sabatini, *News* 35 and 38). Whereas the former dream could indicate that he has traumatic memories which still haunt him, the latter could refer to his former job which was watchmaking (Sabatini, *News* 35 and 38). As outlined in section 2.1.2, Alzheimer's patients usually have problems with remembering newly acquired information. In other words, the further events date back, the longer they can be remembered, which could explain why Ambrose, at least in his dreams, still has an idea about his time at war and his former profession at this stage of the disease.

Sometimes when he dreams, he has troubles differentiating between dreaming and reality. For instance, after having dreamed about animals, he looks for them in the house or outside (Sabatini, *News* 36-37). However, interestingly, in his dreams, his thoughts seem to

be clearer than in reality: “Ambrose often wants to know what is happening. In his dreams he asks the people he knows and the strangers. When he’s awake he puts the question in his eyes and looks at Peggy. There was the question. There. He doesn’t know what thinking is. […] Dreaming is better” (Sabatini, *News* 39).

3.7.3.2 Peggy

Peggy’s dreams seem to mainly center around the actor Sean Connery and her husband Ambrose:

> In Peggy’s dreams Sean Connery is the bad guy who wants to kill Ambrose and marry her. She has to choose between her husband, Ambrose, whom she’s been married to for forty-three years, and Sean Connery. The choice is complicated by the fact that if she chooses Ambrose she chooses death. Death with Ambrose or life with Sean. Because Ambrose buys her carnations, a dozen pink ones with baby’s breath, seven ninety-nine cash and carry, she chooses to die with Ambrose rather than live in sin and betrayal with Sean. (Sabatini, *News* 35)

When closely considering Peggy’s situation, namely taking care of her sick husband who most likely cannot express his affection to her anymore, let alone recognize the woman he married years ago, it could be argued that in her dreams Ambrose is still her hero. To put it differently, it can be presumed that relying on Ambrose and receiving support from him in every possible life situation belongs to Peggy’s past. However, people usually need a constant companion in their life and since Ambrose can no longer fulfill this role in reality, Peggy acts out her desires in her dreams, namely longing for the Ambrose who would never let her down and hurt her as well as show his love.

Furthermore, the statements “[d]eath with Ambrose or life with Sean” (Sabatini, *News* 35) and “she chooses to die with Ambrose rather than live in sin and betrayal with Sean” (Sabatini, *News* 35) could indicate that Peggy will continue caring for her husband at home at this point of the story. Generally speaking, looking after a person who suffers from Alzheimer’s is a difficult and exhausting task. Therefore, it is possible that Peggy feels that she cannot handle the responsibility of caretaking once in a while leading to thoughts about leaving Ambrose resulting in a bad conscience torturing her in her dreams.

In Peggy’s dreams, she lives with Ambrose in the 18th century in Scotland. Both of them will inherit land in the Scottish Highlands, which seems to be the main reason why Sean Connery wants Ambrose dead. However, he fails killing Ambrose twice (Sabatini,

News 36). It is stressed that Peggy has no clue as to why she has this dream (Sabatini, *News* 38): "[S]he doesn't care about Sean Connery one way or the other. Her feelings about Ambrose are much less neutral. She has always loved him, but since he got Alzheimer's, sometimes she hates him, too" (Sabatini, *News* 38). This statement could serve as another support for the previous claim that Peggy feels guilty for even considering neglecting her husband, or in this context, for having hateful feelings towards him, which in turn could explain why Peggy is torn between two men in her dreams.

Nevertheless, as in real life, she chooses Ambrose in her dreams, illustrated in the next two examples: "She's loved Ambrose since she was a girl" (Sabatini, *News* 39) and "Peggy goes home to bed with Ambrose" (Sabatini, *News* 40). It could be presumed that although the woman sometimes consciously and unconsciously struggles with taking care of her husband, she truly cares about and loves him.

More information on dreams, or rather, their interpretation, can be found in Sigmund Freud's book *The Interpretation of Dreams* (cf. Freud, *Interpretation*).

3.7.4 "Collecting"

"He never told his mother about Ambrose McLean yelling at him. It was his problem and he maintained for ages an awful silence about the smells coming from the house behind Peggy who smiled less and less as she paid Stephen every other week. Finally, she phoned the paper and set up a direct account and Stephen never had to go any more."[24]

This short story, a figural narrative[25], focuses on Stephen, a teenage boy delivering the newspaper, who has known Ambrose for a long time and also witnesses Ambrose's changing behavior. However, he does not seem to be aware that Ambrose suffers from Alzheimer's disease and, thus, does not seem to know how to deal with the new situation when collecting the money from the family.

3.7.4.1 Old Times, New Times

Generally speaking, Stephen has always enjoyed collecting money for the newspaper from the McLean family. Peggy has served him a sweet snack and Ambrose has pretended not to be able to find the money looking for it in odd places making Stephen laugh (Sabatini, *News*

[24] Sabatini, *News* 52.
[25] See Stanzel in section 3.7.1.

46-48). However, when Ambrose started to suffer from Alzheimer's, the task of collecting the outstanding money has become quite difficult for the teenager:

> If Peggy was home she smiled and paid him and since this seemed how things should always have been, Stephen tried not to notice that he wasn't invited in any more. If Peggy wasn't home he would stand on her porch while Mr McLean looked for money. He rattled the change in his pockets. Pulled some out, but not six dollars' worth. Through the door Stephen saw him look in envelopes on the counter. In the little china pitcher on the bookcase that was full of odd keys and screws and pennies. That was where they kept the punch card for Stephen to punch when they paid him. Ambrose gave him the card but not the money. Mr McLean wasn't smiling. *Stephen stared, trying to get the joke.* […] 'That's six sixty, Mr McLean.' Ambrose stood looking at him. *Stephen didn't know what to say.* 'It's six sixty, Mr McLean. You know. For the paper.' Ambrose took out his wallet and gave Stephen two ten-dollar bills. Stephen had change ready in his hand, smelling of sweat and newsprint and copper. Ambrose had dropped his hand, he was't [sic] holding out his hand to take the money. *Stephen's feet were itchy. His face, hot. He must be an idiot. He couldn't make himself understand.* Mr McLean said, 'Well, then.' 'Here's your change.' Stephen reached past Ambrose and put the money on the shelf. [emphasis added] (Sabatini, *News* 48)

Since Ambrose has been sick, Stephen has not been invited in anymore, which the teenage boy has tried to ignore as this seemed to be the only change he has noticed when Ambrose is home alone, because he also looks for money in various places, but in contrast to the past visits, it is not supposed to be a joke, but rather reflects the ongoing process of his disease (see section 2.1.2). The main reason why the teenager "stared, trying to get the joke" (Sabatini, *News* 48) could be that he has never encountered a *dementia* patient before and, therefore, is not familiar with the symptoms of Alzheimer's. Hence, it could be assumed that although he seems to notice deep inside that Ambrose behaves strangely, he is not able to make a connection between Ambrose's behavior and his mental health.

On top of that the sick man obviously has lost his ability to handle money (see section 2.1.2), which Stephen does not seem to know. This, in turn, could explain why the boy believes that the unsuccessful attempt to get paid is his fault: "He must be an idiot. He couldn't make himself understand" (Sabatini, *News* 48). Apart from thinking that he is not able to express himself clearly enough to receive the money from Ambrose, Stephen also stops ignoring why he is not welcomed anymore and starts considering other reasons for the suddenly different relationship between him and the McLeans: "He thought he must have farted a bad one or eaten too many cookies last time before they went away. Or didn't say 'thank you'. These people went to church. He should have used better manners. Stupid" (Sabatini, *News* 48-49). This passage serves as a further argument that the young adult is not aware of Ambrose's serious condition and, therefore, blames himself.

Another time when Stephen pays a visit to the McLean family in order to collect the money, it does not only take Ambrose some time to understand why Stephen has come and what he wants, but he also shows aggressive behavior towards the teenage boy, whom he does not seem to recognize at all. In this context, Mace and Rabins point out that "[s]ometimes people with dementia make inappropriate or insulting remarks to other people" (141). As a result of Ambrose's anger, Stephen recalls past events in his life:

> Ambrose asked him what he owed. 'I'm sorry, but it's nineteen eighty.' 'What?' 'Nineteen eighty.' […] *Mr McLean's eyes were squinting and wet. His face was red.* 'This is completely unacceptable! What kind of a business are you running, sir? That you let your accounts get so out of hand. You should be coming to collect more often.' 'Well, I come, but you're not home.' Stephen didn't want to say that just a few days ago he saw Mr McLean through the window, sitting there, just not answering the door. *'Watch you language, fella.'* Stephen knew his mouth was open. *'Don't stand there gaping. Move off, now. What are you doing, standing there? Dumb kid.'* […] It wouldn't have been hard for him to look up and see his eyes, but he didn't do it. There were things in Ambrose's face that Stephen wouldn't see. *Mr McLean's eyes,* for example, which *had tears in them while he tore a strip off Stephen,* as if somebody else was working his mouth and he didn't really want to be talking at all. Or his mouth twisted so mean with black, patchy stubble around it. […] Ambrose had changed into something that Stephen remembered living with, something with lips stretched tightly over dry teeth, with breath blowing down on him like the pockets of gas you hit when you're digging with the floss at the back of your mouth. This, too, was so close to what he had been used to that he didn't for a long time think that Ambrose had gone strange, down a strange road that he himself did not recognize or perceive. Stephen left. Something was making his eyes and his throat hurt. He pounded his feet on the wet sidewalk until his shins were aching. [emphasis added] (Sabatini, *News* 49-51)

Ambrose is angry, which seems to affect the boy in a specific way. With emphasizing that "Ambrose had changed into something that Stephen remembered living with, something with lips stretched tightly over dry teeth, with breath blowing down on him like the pockets of gas you hit when you're digging with the floss at the back of your mouth" (Sabatini, *News* 51), it is indicated that Stephen has experienced or has been exposed to verbal assaults at home, which in turn could serve as an explanation why he has not noticed that Ambrose's behavior has become unpredictable and unusual until this point, as he has been used to being treated this way, which is even directly pointed out in the story: "This […] was so close to what he had been used to that he didn't for a long time think that Ambrose had gone strange" (Sabatini, *News* 51).

3.7.5 "Making Tea"

"This space he occupies. A self and air. Some posture. Some guttural articulation. Labials and sibilants. In place but without sense. Ambrose is in trouble."[26]

This short story, a figural narrative[27], is about Ambrose, the Alzheimer's patient himself. As it can only be speculated what people suffering from Alzheimer's think and feel, especially when they have arrived in a later stage (see section 2.1.3), it is highly revealing as well as insightful to learn about a sick person's possible thoughts and feelings.

3.7.5.1 Confusion and a Different Perspective

Generally speaking, in this short story, one gets a vague idea of Alzheimer's patients' confusing thoughts and how they probably perceive their environment, exemplified in the following excerpts (see sections 2.1.2 and 2.1.3):

> The Lord has been mindful of us He will bless us. Grammar. Present perfect? Lord has been mindful, continues to be mindful, will be mindful. Will bless us. (Sabatini, *News* 55)

> In his way. In way. Move. Get up. Want some toast. Stomach hurts. Hurts. Hurts. Coffee cup drink coffee. Got to go. Go. Tables chairs sit. Coffee. Black. What? (Sabatini, *News* 56)

> Ambrose wanted to know what was happening. Ambrose can't think very well. Doesn't know what thinking is. […] How would he think? How would he get from A to B? (Sabatini, *News* 55-56)

> What about the chair. It offends him. Someone keeps telling him. He keeps hearing a word. He doesn't like the sound of it. Hearing the word makes his lips pruned with disapproval. Favourite. Consonants. It means Peggy's disgusted. Yes, she is Peggy. She's a she. There's the chair. It's a chair. My favourite. (Sabatini, *News* 56)

> His toothbrush. For his teeth. Help, he said he screamed scratchy bitey stolen his tooth… there it is. (Sabatini, *News* 63)

> This is smiling? (Sabatini, *News* 56)

> The bathroom moves. The climb down, no foothold. He knows it's down. He can't go. (Sabatini, *News* 57)

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[26] Sabatini, *News* 56.
[27] See Stanzel in section 3.7.1.

> You can't make tea until you go down to the kitchen. He will not. He cannot. There should be walls and floors. There should be something to hold on to. There is hunger and dark, a growling hole. (Sabatini, *News* 55)

> Home he sits close to her [foster daughter Connie]. She's such a youngsweet woman. Warm. She is warm. Plunks beside him on the couch. He wonders. Tongue? She looks at him. He made a mistake. A sweet young mistake. She's warm. Knows she's warm. What else does she know? He's dad, not dad. Old, not old. Tongue, lips. He knows what they're for. Not for Connie. Ambrose, he says to himself though it's an effort, these are not for use with Connie. (Sabatini, *News* 62)

These short passages clearly illustrate that Ambrose has difficulties using and understanding language and thinking coherently. For example, he wonders how the different parts of speech are used and what they could mean. Especially obeying orders seems to be problematic for him as the vocabulary of his mother tongue does not always seem to make sense anymore. Furthermore, while thinking he even wonders what thinking is, which emphasizes his inability to think clearly. Everyday objects suddenly seem to highly stress Ambrose. It is indicated that Ambrose does not always know what a chair is. To be more specific, he seems to forget what a chair looks like and what it is for once in a while and, therefore, he is surprised when he sees it. Although he remembers what a toothbrush is for, the act of brushing his teeth seems to have become eerie all of a sudden. It is additionally pointed out that Ambrose must have forgotten certain facial expressions like smiling as well as how to move. He also makes an inappropriate attempt to kiss his foster daughter Connie. However, it seems that he is at least slightly aware that what he tries to do is wrong as he battles with his conscience. Importantly, as it is also suggested in these passages, it has to be stressed that Alzheimer's patients' thoughts are sometimes clear, as explained in section 3.7.1.3, and not always confused.

In this short story, one does not only learn about Ambrose's confused thoughts, but also about his angle on some of the events described before (see section 3.7.1). To be more precise, the next two incidences, which will be outlined below, have already been discussed from Peggy's point of view. For example, in section 3.7.1.1, Peggy recalls the moment when Ambrose is not able to make tea while having visitors. This is how Ambrose experiences this situation:

> He wanted to make tea. […] He couldn't see where to put water in. The shape was wrong. There was the wire with the points. But it was wrong. He carried it into the living room. Not frightened yet. Peggy turned like a deer will. Saw. He felt warm when she looked at him. He can't seem to make the tea. He didn't say it out loud. He must have spoken. Everyone laughed and Peggy took him into the kitchen and put the square thing away. Then she got the kettle. (Sabatini, *News* 57)

As discussed in section 3.7.1.1, Ambrose has not yet noticed at this point that he is seriously ill. The statement that he is "[n]ot frightened yet" (Sabatini, *News* 57) confirms this assumption.

Another incidence from the short story "Cold Hands" (see section 3.7.1) is now described from the Alzheimer's patient's perspective:

> There is a woman in black with white skin who sits on the end of Peggy's new couch. She stares at Ambrose, frightens him. She looks ferociously hungry, and smells like earth and worms, gap-faced, rotting. Waiting. Ambrose forgets things but when she goes away he doesn't forget her. She is his only memory. Lord, he says and Peggy covers her up with the rug but he can see the outline of her boniness below he knows she hasn't gone away. She is waiting. (Sabatini, *News* 64)

This passage suggests that Ambrose appears to have frightening hallucinations. In section 3.7.1.3, it is pointed out that Peggy "got so tired of covering up the invisible lady all dressed in black that Ambrose would see at the end of the couch" (Sabatini, *News* 21). Despite the fact that it is possible for people suffering from Alzheimer's to have hallucinations (see section 2.1.2), one gets some insight into what it can feel like to experience sensations which seem real, but solely are produced by the mind of the person affected by the disease.

3.7.5.2 Feelings

Ambrose's feelings are pointed out as well throughout the story. Mainly, the sick man is angry with his wife Peggy and blames her for not being able to live the same life as he used to anymore (see sections 3.7.1.2 and 3.7.1.3), which is illustrated in the next two passages (see sections 2.1.2 and 2.1.3):

> With *Peggy* of the *scratchy bitey nails* and *bossy face. Peggy's in charge of Ambrose.* Drives. Buys him a tie. Steals all his money. He can't buy himself a cup of coffee. She steals his car. Loves him, she *cries.* Feeds him rubber stuff. It's pork tenderloin is what she *yells* at him. Eight ninety-nine a pound. He spits it out on the floor where it belongs. Ambrose, you quit, she says. [emphasis added] (Sabatini, *News* 62)

> *Knows she hates him. She says she loves him. She is hard. Her nails hurt his arm* when she *drags* him. *Her voice hurts his ears. She gives him orders.* She is full of things he has to do, eat, go, speak. [emphasis added] (Sabatini, *News* 57)

Peggy takes care of Ambrose. She makes sure that he eats, gets dressed, does not spend a ridiculous amount on, for instance, coffee (see 3.7.1.1), and does not drive a car. However, he is not able to realize how much he relies on Peggy and that he would probably not be able

to survive, if he was all by himself in this stage of the disease. Therefore, he interprets Peggy's care as degrading. As he does not seem to be able to perform most of them by himself anymore, he feels frustrated believing that Peggy puts him under too much pressure and, therefore, gets angry with her.

Ambrose also seems to be afraid of the situation he is in (see sections 2.1.2 and 2.1.3):

> He opened his eyes not knowing. Where is the light? What is light? God? No memory; no prayer. Wait, he said. He can feel his back against the sheet and the mattress. He can feel he is alive. He is something. I. *He wants to write it down. He's scared.* How to keep riding his bike and visiting Connie [foster-daughter] and being with Peg when the scream lives in his throat ready to go. [emphasis added] (Sabatini, *News* 60)

As this passage indicates, the Alzheimer's patient fears the future and death. To be more precise, at first, he seems to try to figure out if he is still alive and after he has found out that he is not dead yet, he wants to put it down in writing, probably in order to remember it. In addition, he is afraid of the future as he worries if he still will be able to ride his bike, visit Connie or be with Peggy. Ambrose is also scared of the disease itself or rather the symptoms it entails: "He knows the bed is wet again. She'll find out soon and *yell* and *cry. She'll push him* into the other bed and he'll make it wet too. He can go all night. He has to. *He's afraid"* [emphasis added] (Sabatini, *News* 57). However, when looking closely at this excerpt, it could be argued that Ambrose fears the incidence itself less than Peggy's reaction to the symptoms caused by the disease like in this case incontinence.

At some point, the sick man develops paranoia and shows aggressive behavior believing that Peggy tries to seriously harm him (see section 2.1.2):

> Would you like some toast? she said. And Ambrose yelled when he touched it. So stupid of her *not to warn him* she'd cooked the bread. We have it every morning, she said. Well, he thinks he'd know about brown scratchy bread burning his throat every morning. Sometimes he thinks *she'll kill him* all the while she'll have that puzzled and patient look on her face one day *he'll have to slap.* [emphasis added] (Sabatini, *News* 58)

As he keeps forgetting what toast is and that it is usually served hot, he starts thinking that Peggy does not warn Ambrose on purpose. He starts believing that his wife tries to kill him. However, his thought that "one day he'll have to slap" Peggy (Sabatini, *News* 58) does not remain unfulfilled much longer, because soon after it becomes reality: "It should have been clear. She showed him the *bruise on her arm* this morning and said *he gave it to her.* Why at this point has she become such a *liar?* And so *stupid"* [emphasis added] (Sabatini, *News* 61). Ambrose might call her a liar, because he does not remember what has happened the

night before. Confirmation can be even found in the next excerpt: "He knows Peggy *was crying* yesterday. The balled-up tissues are still soggy in the bathroom wastebasket. She's *okay* today. He can't remember *what happened yesterday*. He *woke from blackness* this morning" [emphasis added] (Sabatini, *News* 59). Although Ambrose does not seem to know what has happened the day before, at least sometimes, he seems to be able to sympathize with Peggy and seems to be aware that taking care of him puts a strain on his wife (see section 3.7.1.3): "She goes through what must be like hell in the day, and often in the night. He knows it; he makes it" (Sabatini, *News* 56).

3.7.6 "The Cemeteries Act"

"She thinks it's funny I'm good at planting things. She hopes maybe I'll plant Ambrose and he can grow up into a tree she'll sit under, shaded, watering the roots."[28]

This short story, a first-person narrative[29], focuses on Connie's husband, Larry, who works at a cemetery.

3.7.6.1 Suffering

From the very beginning of the short story, one gets an idea of Larry's thoughts about Ambrose, or rather, his wife Connie and her close relationship to the Alzheimer's patient.

[28] Sabatini, *News* 71.
[29] "It is characteristic of the first-person narrative situation that the mediacy of narration belongs totally to the fictional realm of the characters of the novel: the mediator, that is, the first-person narrator, is a character of this world just as the other characters are. The world of the characters is completely identical to the world of the narrator" (Stanzel 4).

By means of example:

> Connie visits Ambrose two times a week and *feels guilty* that it isn't four. She goes at all different times because of the kids and going to the university and making supper and she never sees the head nurse, the one in charge of Ambrose, that Peggy is always talking about. This wouldn't be too important *except that she has no witnesses.* No one to say to Peggy, 'Your beautiful daughter Connie is very devoted to Ambrose, isn't she?' Connie thinks I don't get it but I do. *She's scared, she's sure Peggy thinks she never goes.* Connie slams doors when I tell her to let Peggy think what she likes. As if it were that easy, she says to me. But she usually makes a good supper when she's mad. [emphasis added] (Sabatini, *News* 67)

> Connie says, 'Would you mind if I visit Dad?' Anything less than 'What a wonderful idea' gets me a good supper. Sometimes I'm pretty hungry so I say 'You were just there a couple a days ago. You have papers to mark and the girls have to get ready for camp', or some such thing. And she stays home. Angry, she makes sauces, gravies, no lumps, salted just right. (Sabatini, *News* 68)

When taking a close look at these passages of the book, one could argue that Connie's relationship to Ambrose poses a burden to Larry and their marriage to a certain extent. To be more specific, as illustrated in the first example, Connie feels obliged to visit Ambrose more times a week, which becomes clearer when learning that she feels guilty if it does not work out. Furthermore, she fears that Ambrose's wife thinks that she does not come and see him at all, which could also add up to her obligational feelings of paying Ambrose a visit. When Larry tries to ease the tension, his wife becomes angry with him. However, with stressing that "she usually makes a good supper when she's mad" (Sabatini, *News* 67) and with pointing out that if he is hungry, he indirectly asks her to stay at home with reminding her of her other duties, it could be assumed that Larry sometimes feels neglected and also jealous of his wife's close rapport with the sick man, which, in turn, could present a burden for Larry's and Connie's relationship. More clues for this assumption can be found in the following excerpt:

> It's a big thing, watching Ambrose die. I try not to think about it. *I wish Connie could take a vacation from thinking about it.* I know she'll come to visit where Ambrose is buried, where he plain isn't. I've been cutting off the stalks of ripening flowers, tying a paper bag over the seed heads so that when they split, the seeds will fall into the bag. *I'm making my own seed packets so Connie can plant some bee balm and foxglove around the headstone.* […] She will tend them, she will fuss and prune and water them, tending them as she tended him. [emphasis added] (Sabatini, *News* 76-77)

Despite pointing out that Larry tries to push Ambrose's state of health to the back of his mind, one could presume that his affection for his wife is highlighted again, not only with mentioning that he wishes that Connie could forget about Ambrose's serious condition at

least for some time so she can relax, but also with describing the preparation of flowers for Connie in the case of Ambrose's death. However, by stressing that "[s]he will tend them, she will fuss and prune and water them, tending them as she tended him" (Sabatini, *News* 77), it is indicated again that he feels neglected and is jealous of the Alzheimer's patient. To be more specific, one learns in the story that Connie does not share the same hobby as her husband, namely gardening (Sabatini, *News* 70). Although Larry is aware of his wife's dislike (Sabatini, *News* 70), he still assumes that she will take great care of the plants on Ambrose's grave, which, in turn, could mean that he thinks that Connie does not give him the same attention, love, and support as she gives Ambrose because she refuses to help her husband in the garden. Therefore, he might experience jealousy as well.

Additionally, as indicated in the next quote of the book, Larry does not seem to understand his wife and her way of dealing with Ambrose's disease. After a visit to Ambrose has not gone so well, Connie talks about it with her husband (Sabatini, *News* 71). His reaction is as follows: "I hope she wouldn't cry until I finished weeding the squash and she didn't. Her voice was very dry and splintered and hurt me the worse. Sometimes I don't get why she puts herself through this. I told her to take me out and shoot me if I ever get like Ambrose. I don't visit him" (Sabatini, *News* 71). Larry does not understand why she still visits him although it seems to put an even greater strain on her than not visiting him does. Not only is her husband aware of the stress she puts herself under with going to the nursing home, but he also seriously worries about her well-being. To be more specific, with pointing out that "[h]er voice was very dry and splintered and hurt me the worse" (Sabatini, *News* 71), it is shown that it affects Larry when his wife does not feel well. In other words, it seems that Connie's feelings transfer to him. Although he feels sympathy for Connie and cares about her feelings, he does not seem to feel the same way for Ambrose as he usually does not pay him visits. Both interpretations become clearer in the next excerpt: "She wants me to do the grave for Ambrose. A nice enough grave can be done in about a half hour, but she knows I'll take my time with the backhoe and the finishing. I'll be glad it's over" (Sabatini, *News* 75). From reading this short extract, it could be argued that Larry wants to fulfill his wife's wish, which underlines his strong feelings for her. However, two different interpretations as to why he thinks "I'll be glad it's over" regarding Ambrose's death are possible as well (Sabatini, *News* 75). One of them is that Larry worries about his wife and hopes that Connie will feel better again as the stress should reduce once he has died; the other one is that Larry and Ambrose have never had a close relationship, which is indicated in the statement above, claiming that he hardly ever visits Ambrose. However, although

Larry seems to be aware of and respect his wife's emotions, he does not seem to understand why she feels this way. Therefore, it can be safely assumed that this could pose another burden to their marriage as it can be argued that mutual understanding is of utmost importance in a relationship.

In this context, Steven Zarit and Anne Edwards state that "[a] […] source of family tensions is when caring for a parent affects the caregiver's marital relationship" (266). Creasy et al. have arrived at the conclusion that women who have a parent suffering from Alzheimer's have a more negative relationship with their spouses than women who have a healthy parent (cf. Creasy et al.). Thus, after having closely looked at Connie's and Larry's relationship and the study conducted by Creasy et al., it seems safe to argue that their relationship is affected by and suffers from Ambrose's condition to a certain extent.

3.7.6.2 The Visit

In this story, one is made aware of the fact that Larry usually does not visit Ambrose, discussed in section 3.7.6.1. It is said that he has only been a few times with Connie (Sabatini, *News* 73). Only once he goes by himself without telling Connie before and after the visit, keeping it to himself:

> The cemetery isn't far from the Health Centre and Ambrose looked happy to see me. Like he knew he should know me. He was walking along so I did too, took his arm, told him it was a hot one. Some of the men were in tie-back gowns showing diapered backsides. Do I hope I die before this happens to me? Do fish swim? He's her father. He still looks pretty good. Too thin, white and cold as though he'll be heading my way soon. Shakes hands though. Likes to try out a wink and a nod. Like we're just laughing at a joke but I don't know who it's on. He had words with me only once. About Connie before she married me. He said I wasn't making her happy, wasn't treating her nice. If I didn't shape up he'd put a stop to things. He wasn't kidding around. No smiling, no conversation. I shaped up. (Sabatini, *News* 73)

This passage serves as further indication for the view suggested in section 3.7.6.1 that Larry and Ambrose have never been really close. Apart from that this excerpt also reveals that Larry is in some way affected by Ambrose's disease. To be more precise, with asking himself "[d]o I hope I die before this happens to me?" (Sabatini, *News* 73), it could be implied that seeing Ambrose's deterioration makes him consider the severity of this disease, which is also pointed out in the following passage: "What if he's the future? is what I think. I'd rather put my head in the sand than face that. But he was a man once who'd look you in the eye when he talked, and tell you straight. You can't ignore that" (Sabatini, *News* 73).

Although Larry mentions that "I'd rather put my head in the sand than face that" (Sabatini, *News* 73), he seems to be aware that Ambrose was healthy once as well and hence seems to realize that the majority of people do not and probably cannot know for certain how they would react if they found out that they suffered from Alzheimer's disease. However, right after Larry wonders if he would want to die before developing Alzheimer's, illustrated in the first passage, he asks himself "[d]o fish swim?" (Sabatini, *News* 73), which could suggest that his worries are not very serious and that he does not only try to ignore Ambrose's situation (see section 3.7.6.1), but also does not spend a lot of time thinking about the future, additionally indicated in this statement: "I don't take the long view. Connie calls me the daily guy" (Sabatini, *News* 76).

3.7.7 "Mitigations"

"Peggy has been to see him today with fresh shirts and trousers. Gord admires Peggy's devotion to starch and steam. If a dose a day were the cure for Alzheimer's, Ambrose would have been home months ago."[30]

This short story, a figural narrative[31], centers around Gord, a nurse working in the Health Centre where Ambrose stays.

3.7.7.1 Devotion

Generally speaking, Gord is very devoted to his work at the nursing home. Among others, he has been taking care of Ambrose and hence has been witnessing his deterioration process. He helps him with his daily activities, ranging from body hygiene, getting dressed, and walking to feeding him (Sabatini, *News* 82 and 84). It seems that his nursing job is more than a mere profession for him.

[30] Sabatini, *News* 82.
[31] See Stanzel in section 3.7.1.

To be more specific, working with old people is his vocation, which becomes clear when reading the following two passages, in which Ambrose's bad fall is described in detail, and Gord's reaction to this accident:

> He doesn't like to look in Ambrose's eyes, which have, in the merest three-day absence, become suddenly vacant. He keeps his mind on the moment, watching out for Ambrose's safety, thinking about what he has to do next, who needs pills, who needs a diaper change. He turns for a second, the time it takes to swivel your head on your neck first in one direction and then back, say west, and then east and done. Ambrose is on the floor. Flat, face first, moaning. Gord sees him go down like a tree. Can't get the A in Ambrose out. Stutters like his mouth is full of Novocaine. Ambrose is on the floor moaning. Ambrose is on the floor moaning and bleeding, forehead, nose, chin, all in contact with hard cold floor. […] There is blood on his face and shirt, dripping onto Gord's arm. Ambrose has closed his eyes. Red bubbles at his nostrils inflate and burst and Gord is delighted to see them. Ambrose is breathing. (Sabatini, *News* 87)

The young man administers first aid right away and makes sure that Ambrose can breathe and is still breathing (Sabatini, *News* 88). It seems safe to assume that Gord cannot be blamed for Ambrose's injuries because firstly, he was standing right next to him and just turning his head for a second and, secondly, because Alzheimer's patients can forget to use their hands to protect themselves when falling or that they have hands at all (Sabatini, *News* 90). However, Gord, at least unconsciously, seems to think that Ambrose's fall is his fault and that he could have prevented Ambrose from seriously hurting himself:

> At night in dreams he wakes up slowly and hot, turning his head west and then east to see Ambrose fall. He falls a dozen times without hitting and Gord is ready. He's ready to catch Ambrose. He knows what's coming. In dreams he can splice that moment into constituent parts with so much time to insert himself and change the outcome. Sometimes his puts his arms out. In the dream sometimes Gord rescues him. Sometimes he pulls his arms away at the last minute. As though he's Bugs Bunny working with the fat trapeze artist. (Sabatini, *News* 90-91)

When looking closely at this passage, one could infer that Gord blames himself for this terrible accident, which resulted in dreams that he is able to rescue the Alzheimer's patient. To be more precise, he seems to think that he is to be blamed for Ambrose's fall, as he was inattentive for a moment when he was walking next to Ambrose. Thus, it could be argued that Gord's bad conscience reflects his high regard and strong affection for his job and underlines the previous assumption that he works in the nursing home because he believes that it is his purpose in life.

3.7.8 "The One With the News"

"This is what I want: I want to claim Ambrose's body from the authorities. With my tears, these tears I live with, I would wash his feet and then dry them tenderly with my hair. I want to lay him in a vault, roll a stone in front of it, and mourn him daily. When some days have passed, I want to take some scented oil from the shelf above the bathtub and visit that vault early on a misty, quiet morning. I want to be terrified to see the stone rolled back and light blaze within the tomb. I want two angels wearing lightning to tell me he is risen. I want to be the one with the news."[32]

This story, a first-person narrative[33], is told from Connie's point of view and reveals more about the alleged reasons for her close relationship to her foster father Ambrose, and how his disease is affecting her.

3.7.8.1 The Savior

As illustrated throughout this story, Connie's childhood was rather rough before she became to be Ambrose's and Peggy's foster child:

> I was glad that I had never told anyone about my cottage years. I never was so clean before and as I spent more time in their company [McLean family], it seemed to me that the years before, with my real family and that man I hated [tenant of one room] and my molesting uncle and disapproving aunt and delinquent cousins and Bill and Lucia [neighbors], had happened to someone else, or maybe it was something I'd only read about. If I could stay long enough with Ambrose and get clean enough and buy enough shoes and acquire my Ph.D. then maybe I never was that cottage girl. (Sabatini, *News* 101)

After her biological father had died, her mother bought a cottage in the Kawarthas where they stayed during the warmer seasons together with Connie's brother and the tenant (Sabatini, *News* 93-94). As clearly described in this passage, she made horrible and traumatic experiences at this cottage. One reason for Ambrose's and Connie's close relationship (see section 3.7.6.1) could therefore be the fact that she had never encountered a loving, caring, and responsible man in her life until Ambrose came along. However, she does not have hateful feelings towards her biological father. He passed away when she was still very young and she does not have many memories of him (Sabatini, *News* 101). Nevertheless, it could be that Connie thinks of Ambrose as her savior, which is suggested in the following passage: "The cottage is one of the things from which my new father saved

[32] Sabatini, *News* 107.
[33] See Stanzel in section 3.7.6.

me" (Sabatini, *News* 100). This, in turn, could serve as a further explanation for her deep connection to her foster dad.

Furthermore, her love for Ambrose seems to be so strong that she even imagined to be the biological offspring of Ambrose at some point in her life: "I look like Ambrose used to look before he went into the sanatorium. Our hair is the same colour and I have his oversized ears and narrow, delicate feet. Our teeth are crooked. For a while I liked to imagine that maybe Ambrose was my real father, full of goodness and kindness" (Sabatini, *News* 101). In addition, by pointing out that she thinks that Ambrose is "full of goodness and kindness" (Sabatini, *News* 101), her admiration for the Alzheimer's patient is stressed even more.

3.7.8.2 Affection

Throughout this short story, one finds out more about Connie's thoughts on and her way of dealing with Ambrose's disease. Generally speaking, she seems to care deeply about Ambrose. Thus, she seems to be seriously affected by his deterioration process hinted at in the next two passages:

> Ambrose won't say what he remembers. He won't say my name but he seems very happy to see me so I believe he recognizes me as someone important to him, but I'm not really, not any more. (Sabatini, *News* 104)

> Sometimes I say to him, 'Where are you, Dad? Are you in there?' He doesn't answer me but I like to ask, just in case he really is in there, quieter than ever, annoyed with everyone for talking to him as though he were an immigrant whose grasp of English will improve if we only speak slowly and loudly enough. (Sabatini, *News* 106)

When reading these two passages, it becomes obvious that Connie takes care of her sick foster father, because she truly loves him. However, by emphasizing that she thinks that "I'm not really [important to him], not any more" (Sabatini, *News* 104), it could be indicated that she feels that she is no longer actively involved in Ambrose's life since he has been institutionalized, because she does not need to support him anymore (Sabatini, *News* 104). Therefore, one could assume that she feels left out. As a result, she has come up with a plan in order to stay close to him: "I construct my own significance to maintain my connection with Ambrose, whom I love, whether he talks or drools or sleeps" (Sabatini, *News* 104). Furthermore, she seems to want to make sure if Ambrose's mind is still alert. To be more

precise, she still hopes that his condition will improve, which becomes evident in the following passage:

> I imagine that I am devoted to him, that everybody else has shut up once and for all about drinks of juice and what's for supper and why are you going to school when you're so old? I imagine taking my books and papers to balance on my lap in a chair beside him, preparing for tomorrow's seminar, keeping vigil with Ambrose. So that if he should open his eyes and know something, it would be me that he knows. *I would like to be known again,* to visit that place he made for me. [emphasis added] (Sabatini, *News* 107)

However, Ambrose used to say to "'Remember, Connie, *"To be absent from the body is to be present with the Lord."'"* [emphasis added] (Sabatini, *News* 106). Connie therefore asks herself: "I want to know where he is now, when his body is demanding only the merest presence. Does God have the rest?" (Sabatini, *News* 106). Thus, it could be argued that another explanation for her checking with her sick foster father if he is still mentally alert, is, because she wants to assure herself that he is still alive.

Moreover, one finds out that Connie does not always agree with the decisions of the rest of Ambrose's family concerning his physical condition:

> There's a chance he may have Hodgkin's disease, or one of the other more euphemistically named cancers. The family has decided against a biopsy and the taking of any heroic measures. If they'd asked me I'd have told them I thought Ambrose was worth any number of heroic measures, even though he's not too clean any more and doesn't make much sense. I tell him he's my dad and I'm his Connie. I told him I got a new job and I was going to get rich and come get him and the two of us were going to Bermuda. That's when he told me I was full of beans and I laughed. (Sabatini, *News* 105-106)

In contrast to the other family members, Connie would have agreed to further tests. The statement "[i]f they'd asked me I'd have told them I thought Ambrose was worth any number of heroic measures" (Sabatini, *News* 105), could imply how desperately she wants to save his life and hopes that he will get better, which is indicated by her wish to get away with the Alzheimer's patient.

3.7.9 "Epigrams"

"The funeral did Ambrose credit. There were police acting as point men at all the intersections between the church and the cemetery, saluting as Ambrose's hearse passed by."[34]

This short story, a figural narrative[35], is divided into seven short sections. They basically center around Ambrose's funeral. One learns mainly about Connie's and Peggy's thoughts regarding Ambrose's life and death and his disease, probably crossing their minds during the religious ceremony.

3.7.9.1 A Smell to Cover a Smell

Apart from finding out more about Ambrose's life and some time he spent with one of his friends, this story reveals Connie's thoughts on death and the funeral, which she thinks is fine (Sabatini, *News* 109-111).

When Peggy is not at home, Connie looks after Peggy's house and starts thinking about death (Sabatini, *News* 109):

> Connie watered the plants listening to the pendulum move time. It never occurred to her that clocks should stop. That Ambrose should stop, and so suddenly. No suspense. Like death described by Guildenstern. In one scene you're here and in the next, you're gone. Connie had a good sense of gone. Both her parents were gone. She knew that gone was gone for good. (Sabatini, *News* 109).

Connie has already been confronted with the death of loved ones at a very young age. Her biological father died when she was an infant, her biological mother died a few years later (see section 3.7.8). Nevertheless, one could argue that Ambrose's death still strongly affects Connie as they have been really close and as she has cared deeply about him.

3.7.9.2 No Good Comes of Fooling

Ambrose must have been a happy, funny, and brave man throughout his life (Sabatini, *News* 112-113). When the minister brings Ambrose's legacy to the fore during the funeral, he says

[34] Sabatini, *News* 111.
[35] See Stanzel in section 3.7.1.

that "[t]o Alice it was energy, joy, and love. To Connie […] Ambrose had imparted a sense of the value of the individual" (Sabatini, *News* 111). Connie's reaction is as follows:

> What did it mean, she wondered. Had the pastor meant that she was the individual? The wacko? The aberration? Or that she could spot one at fifty paces. Which she could. Spot and avoid. Individuals were attracted to Connie. She didn't know why. She hated granola and she liked rare red meat. […] The minster said she valued the individual. Had Ambrose taught her that? (Sabatini, *News* 111-112)

Connie seems to be a little bit shocked at first when hearing that to her "Ambrose had imparted a sense of the value of the individual" (Sabatini, *News* 111) because she interprets the statement negatively. However, soon after she asks herself if "Ambrose [had] taught her that?" (Sabatini, *News* 112), which indicates that she starts thinking that it cannot be a negative quality if Ambrose has really taught her valuing the individual and, thus, must be a positive one. This shows how important Ambrose was and presumably still is to her (see section 3.7.8).

3.7.9.3 If the Fence Needs Painting

It is again highlighted how deeply Ambrose's death affects Connie: "The worst part of the funeral was leaving the cemetery" (Sabatini, *News* 113). By stating that she longs for "a transgression of the laws of nature" (Sabatini, *News* 114) and "a sudden resurrection" (Sabatini, *News* 114) and by stressing that she must cry a lot (Sabatini, *News* 114), it is demonstrated that she already misses him and that she desperately wants Ambrose back in her life.

3.7.9.4 As He Made Them, He Matched Them

In this short section, Peggy's and Ambrose's loving marriage is referred to (Sabatini, *News* 115-117). It is a situation five years after Ambrose's death: "If you talk to Peggy today about Ambrose her eyes will immediately redden and fill with tears. […] [I]f you make a comment about how hard it is to believe that he's been gone for almost five years her response is sharp, unequivocal. She misses him so much" (Sabatini, *News* 115). Although Ambrose has been gone for quite a while, Peggy is still sad because her beloved husband is not with her anymore.

3.7.9.5 Remember Who You Belong To… and I Don't Mean Me

Besides being informed about Peggy's and Ambrose's parents, emphasis is put on Peggy's feelings after Ambrose has left (Sabatini, *News* 117-119). Peggy feels relieved to a certain extent because the previous burden of caregiver has now been lifted from her shoulders and she trusts that Ambrose is now in good hands (Sabatini, *News* 117). Schulz et al. have conducted a study entitled "Involvement in Caregiving and Adjustment to Death of a Spouse: Findings from the Caregiver Health Effects Study" (cf. Schulz et al). They have found that the health risk behaviors in people who experienced caregiver burden decreased after their spouses' death (Schulz et al. 3123). However, at the same time, Peggy is exasperated because Ambrose is gone and she misses him deeply as pointed out in the next passage (Sabatini, *News* 117): "She wanted visitation rights. She wanted the schedule, the responsibility, the laundry, the aggravated corns from the walk to the Health Centre" (Sabatini, *News* 117). In this context, Susan Robinson-Whelen et al. have reported that formal caregivers' "scores on depression, loneliness, and positive affect [like alertness, energy, enthusiasm] did not rebound to levels comparable to noncaregivers" (573 and 576).

3.7.9.6 Change and Decay in All Around I See

Ambrose's former passion for flowers and photographs is highlighted in this section (Sabatini, *News* 119-120). Furthermore, one finds out more about the discussion which has very likely led to the final decision of placing Ambrose into a nursing home (see Papastavrou et al. in section 3.7.1.2). Primarily, it centers around Connie's thoughts. It is explained why the young woman was of the opinion that Ambrose should fully move to the nursing home. She seems to have been the only one expressing or even realizing that the situation will not become better, but instead will only worsen (Sabatini, *News* 119-124). Connie seems to have felt sorry for Peggy and thought that she needs to be protected from the symptoms of Ambrose's disease:

> Peggy cries every day. Peggy is always frightened and unhappy. She suffers migraines of the kind that used, in the days of health care subsidy and a plentiful and content nursing staff, to send Peggy to the hospital emergency room for syringes of Demerol and Gravol. Now she endures the pain because she can't sleep if Ambrose is awake. Never mind the bruises, which nobody knew about until today. (Sabatini, *News* 122)

3.7.9.7 Nobody Likes a Skinny Girl

In this last section, it is described how Ambrose kisses a girl, while Peggy, already his fiancée, is standing right next to him. Peggy's, Alice's, and Connie's opinions on this incidence are outlined (Sabatini, *News* 125):

> Peggy believes the gum exchange was simply post-war high spirits. Alice, Peggy's real daughter, doesn't know what to believe. The story is strange to her […] But Peggy's adopted daughter, Connie, likes to think of Ambrose as having lived a buoyant, roguish sort of life. The sort of life she lived with him. […] The sort of life where God's affability seemed evident in the saying that framed Ambrose's life, that framed his own chronology. One where good does come of fooling. (Sabatini, *News* 125)

These contrasting reactions to the same story seem to reflect the characters' different attachments to Ambrose.

3.7.10 "Gifts from the Well-Intentioned"

"Ambrose's side was empty. For a long time now Peggy had gone to bed alone."[36]

In this short story, a figural narrative[37], the focus is put on Peggy again. In addition, one learns about John Bayley and his wife Iris Murdoch. John Bayley is a British writer who wrote the memoirs of his wife, who also suffered from Alzheimer's in old age. The two stories, or rather the changing relationships of the two couples because of this horrible disease, are described alongside one another. In this context, however, emphasis will be solely put on Peggy's story. The alleged link between the two couples' declining relation will be discussed in section 3.7.11 when the possible connections between all short stories and the characters will be explored.

3.7.10.1 Longing

Whereas the first short story mainly centers around Peggy's experiences with Ambrose at home, this one is concerned with her ways of dealing with her sick husband in the nursing home. It also outlines how she feels and is coping after his death.

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[36] Sabatini, *News* 129.
[37] See Stanzel in section 3.7.1.

Again, it is indicated that Peggy deeply misses Ambrose after his death. She keeps some of his belongings: "These were things, when lying in bed or using the bathroom in the middle of the night, at which she could glance" (Sabatini, *News* 130). Peggy has probably not thrown away his personal belongings because they remind her of Ambrose and hence comfort her.

Furthermore, in the next passage, Peggy's feelings of longing after Ambrose's death are hinted at again:

> Peggy answers her friends when they ask her how she is doing. She tells them that she's doing fine. […] You have to believe that movement and cleanliness and the structure of meals and errands and laundry and the blessing and curse of conversation is progress. For this belief to be sustained, you need motion, the ability to walk, to wash and dress yourself, feed and toilet yourself. You have to be able to perform these basic activities for daily living. (Sabatini, *News* 132-133)

It could be argued that Peggy only manages to go on, doing the chores she has always done, probably in order to try to restore or keep normality and stability in her life after her husband's death. This, in turn, reveals that she deeply misses Ambrose and wishes him to come back.

3.7.10.2 Strength

It seems that Peggy has difficulties in adjusting to the new situation, namely staying at home alone without her husband who, at this point of the story, is in the Health Centre, mainly due to the reason that she has always felt scared of possible intruders (Sabatini, *News* 129). For instance, when she heard unfamiliar noises in the house, she would wake up Ambrose and ask him to go downstairs and find out what causes the creepy sounds. However, he usually refused (Sabatini, *News* 129) and as a result, "Peggy would lie awake and get a sore head from staring at the bedroom door, longing for a weapon" (Sabatini, *News* 129). As illustrated in this excerpt, the woman must have been really afraid of someone breaking into their house. However, after Ambrose's death, Peggy's behavior changes. When a burglar sneaks into the woman's bedroom and tries to rob her, Peggy defends herself and hurts the intruder (Sabatini, *News* 138). After this incident, Peggy's neighbors, who even invite her to spend the night at their house, ask her if she is really ok (Sabatini, *News* 138): "Peggy thought about that [if she was all right]. She didn't know if adrenaline was making her feel brave or if she was really quite fine. She didn't know if the Lord had given the angels charge concerning her. Her hands were warm. She sat on the couch, sore palm opened beside her,

empty. She said, 'I'm fine. I will be fine.'" (Sabatini, *News* 138). Peggy really seems to feel fine. One could argue that she either has regained her religious belief and, thus, comfort and strength (see section 3.7.1.2) or that she has finally fully realized that she has to take care of and stand up for herself now as her beloved husband is gone forever because he will not return from the nursing home. A very interesting study called "Family Caregiver Satisfaction With the Nursing Home After Placement of a Relative with Dementia" has been carried out by Tornatore and Grant (cf. Tornatore and Grant) and gives more insight to this topic.

3.7.10.3 Worries

However, although her sick husband has died, Peggy still continues worrying:

> Peggy got stuck one night on the Monday movie about a young, beautiful scientist whose father died of Alzheimer's and who had developed a theory about a possible cure. She thought that harvesting the brain protein from big mako sharks and inserting it into the decayed brain cells of an Alzheimer's sufferer would cause the cells to regenerate. No more Alzheimer's. Peggy felt some comfort. *If Alzheimer's had permeated pop culture,* if they were making shark movies premised on it, *maybe her children would have some hope.* She couldn't change the channel. [emphasis added] (Sabatini, *News* 135)

As outlined in section 3.7.2.1, the McLean family seems to suffer from the familiar form of Alzheimer's, which means that Alice, Peggy's and Ambrose's biological daughter, has a high risk of developing this terrible and fatal disease herself one day. Therefore, Peggy is seriously upset because she fears that her daughter will be doomed to suffer from Alzheimer's as well. The reason why it says "maybe her *children* would have some hope" [emphasis added] (Sabatini, *News* 135) could be because, although Connie is their foster child and, therefore, not blood-related with Ambrose and Peggy, she might have inherited the familial form of Alzheimer's from her biological parents, who died when she was young and hence one does not know if they might have developed Alzheimer's. In addition, it is also possible that Connie might suffer from the sporadic form of the disease one day, which no one can be protected against (see section 2.2.1.2).

3.7.11 Links Between the Short Stories

"'Invisible threads are the strongest ties.'"
Friedrich Nietzsche – German Philologist and Philosopher[38]

In this section, possible links and alleged connections between the short stories and the characters will be analyzed and interpreted.

3.7.11.1 Connection

In section 3.7.10, John Bayley and his wife Iris Murdoch have been briefly introduced. He is a British author who has written memoirs of Iris, who also had Alzheimer's disease. In the short story "Gifts from the Well-Intentioned" (see section 3.7.10), the declining relationship between Ambrose and Peggy is outlined alongside that of John and Iris. Both couples share the same fate as Ambrose as well as Iris suffer from Alzheimer's disease, which leads to a dramatic change in both relationships.

Peggy has received a copy of the *New Yorker* from one of her daughters as it includes John's personal history about Iris (Sabatini, *News* 127), presumably to make Peggy feel better. The story about John and Iris illustrates that Peggy and Ambrose are not the only couple having to deal with this fate. Hence, it could be assumed that the daughter believes that John's experiences with his sick wife and how it affected their relationship will help her mother cope with the current situation. For example, it is said in the story that "Bayley writes about a woman who compares being married to an Alzheimer's sufferer to being chained to a corpse, a much-loved corpse" (Sabatini, *News* 132). It is added that "[t]hroughout his relationship with Iris […], she asked him to think of Proteus, to keep holding onto her no matter what kind of shape she assumed, not to let her slip away" (Sabatini, *News* 132). Proteus was a sea god who knew everything, but did not like to share his knowledge. Therefore, he had to be caught first in order to make him talk. However, since he was capable of assuming many different shapes, it was difficult to capture him (Proteus): "But if his captor held him fast, the god at last returned to his proper shape, gave the wished-for answer, and plunged into the sea" (Proteus). One could argue now that statements like these reflect Peggy's feelings and experiences and in turn encourage and confirm her actions. To be more precise, Peggy knows what it means to be married to an

[38] Nietzsche qtd. in Gallagher and Costal 139.

Alzheimer's sufferer and is aware that the disease also affects her and her freedom to a certain extent (see section 3.7.1) and, thus, the comparison to "being married to an Alzheimer's sufferer to being chained to a corpse" is an appropriate one (Sabatini, *News* 132). Furthermore, the many different shapes addressed by Iris could stand for the different stages one goes through when suffering from Alzheimer's as well as the many symptoms one develops in the course of the disease. Thus, Iris' wish that her husband should "keep holding onto her" (Sabatini, *News* 132) and "not to let her slip away" (Sabatini, *News* 132) despite the "kind of shape she assumed" (Sabatini, *News* 132), could mean that she hopes that he will be by her side no matter how sick she is and how she behaves because of this horrible disease (Sabatini, *News* 132). Peggy has been taking care of Ambrose on both good and bad days since he has become sick. Hence, Iris' request could reflect the fears and worries of Alzheimer's patients and in turn encourage Peggy's caring behavior as well as confirm that it is not only right to stay with Ambrose despite his illness, but also that it is what he wants, although he has troubles expressing his thoughts and feelings, and sometimes even gives Peggy a hard time (see sections 3.7.1 and 3.7.5).

3.7.11.2 Past and Present

Interestingly, the minor character, Lucia, appears at two different points in the story. As afore-mentioned in section 3.7.8, Lucia is Connie's neighbor, when she still lived at the cottage in her childhood (Sabatini, *News* 101). Connie has never been very fond of her, which becomes clear when their paths occasionally cross at the Health Centre where she has been placed as well (Sabatini, *News* 98-99): "I can't say hello. I'm sure she doesn't recognize me, even if it's me she's looking at. It doesn't surprise me that she's somehow lost her mind, but it makes me nervous, seeing her with Ambrose whose ears are kind of big and whose front teeth, if he's thirsty, protrude a little. I don't want Lucia mistaking him for a rabbit" (Sabatini, *News* 99). Despite the fact that Lucia farmed and bred rabbits at the cottage (Sabatini, *News* 98-99), one could argue now that Connie's statement that she hopes that Lucia will not think that Ambrose is a rabbit implies that she feels that Lucia is a rather coldhearted and rude person. More evidence for this assumption can be found in the next excerpt: "I [Connie] could never tell, when I visited, if she was yelling at me or one of Bill's kids" (Sabatini, *News* 98).

In the short story "Clean Hands" (see section 3.7.1), one learns that Peggy also runs into Lucia at the Health Centre. Furthermore, it is revealed that she does not only know that

Connie grew up near her, but also that she is familiar with Lucia's past rabbit rearing (Sabatini, *News* 12).

4 Conclusion

> *"'Excessive reservations and paralyzing despondency have not helped the sciences to advance nor are they helping them to advance, but a healthy optimism that cheerfully searches for new ways to understand, as it is convinced that it will be possible to find them.'"*
> *Alois Alzheimer*[39]

To sum up, suffering from Alzheimer's cannot only present a tremendous burden to a patient, but also to the family members and acquaintances of an affected person.

Each short story in *The One With the News* by Sandra Sabatini clearly illustrates the strong effect of this horrible disease on the Alzheimer's patient, Ambrose, and his family as well as on the people living in his immediate surroundings, ranging from his wife, Peggy, his foster-daughter, Connie, his son-in-law, Larry, and his biological daughter, Alice, to Stephen, the paper boy, and Gord, the nurse at the Health Centre.

As one story is told from Ambrose's point of view, one gets an idea of what it can mean to suffer from Alzheimer's and what might go on in an Alzheimer's patient's mind. Ambrose's confused thoughts, frustrated and angry feelings as well as aggressive and inappropriate behavior because of his disease are described. However, it has to be borne in mind that Alzheimer's patients also have better days, which means that their thoughts are sometimes clear and that they do not always behave angrily and inappropriately (see section 3.7.5).

Apart from Ambrose himself, Alzheimer's seems to have the greatest impact on Peggy, who is his primary caregiver, when he still lives at home. She also visits her husband regularly at the Health Centre, where Ambrose stays when he arrives in a later stage, and, thus, spends the most time with him compared to the other family members. Peggy lives through a range of emotions during her husband's illness. She grieves and worries, feels lonely and guilty, is exhausted and suffers from fatigue. In addition, at first glance, she sometimes seems angry with God, with Ambrose's physician, and with Ambrose himself because she seems to need someone to be made responsible for his condition and the difficult situation they are facing (see section 3.7.1).

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[39] Alzheimer qtd. in TauRx.

Connie, Ambrose's and Peggy's foster daughter, loves Ambrose very much and seems to have difficulties with accepting that her foster father's mind gradually deteriorates and that this process cannot be stopped. Her husband, Larry, seems to be jealous and seems to feel neglected because of Connie's close relationship with Ambrose, which, in turn, seems to present a burden to their marriage (see sections 3.7.6 and 3.7.8).

Alice, the biological daughter of Ambrose and Peggy, will undergo surgery and will have a tubal ligation, probably because she fears that her future children, if she had some, would also suffer from Alzheimer's, as it seems to run in their family. However, Alice seems to be very concerned about her own future as well and also seems to be very afraid to succumb to Alzheimer's one day. Furthermore, she seems to struggle with feelings of guilt because she is not in close contact with her parents, does not actively take part in their lives, seldom pays them a visit, and hence is neither there for her mother, nor her sick father. In addition, Alice has sleeping and eating problems which could be the result of her fears and her bad conscience (see section 3.7.2).

Stephen, the paper boy, has an unpleasant encounter with Ambrose, when he tries to collect the money for the newspaper. The Alzheimer's patient shows aggressive behavior towards the teenager due to his disease. However, Stephen is not able to attribute it to Alzheimer's and, thus, seems to be overwhelmed by the situation (see section 3.7.4).

Gord, who is Ambrose's nurse at the Health Centre and very devoted to his job, is haunted by feelings of guilt after the sick man has had a fall during his duty. At least unconsciously, he seems to think that the accident was his fault, which, in turn, illustrates that taking care of *dementia* patients is more than a mere profession to him (see section 3.7.7).

As is illustrated in the short stories, Alzheimer's disease can have numerous effects on family members and people of the immediate environment of an Alzheimer's patient. Every person has his or her individual ways of dealing with an affected person and handling the difficult situation they suddenly find themselves in.

Alzheimer's is a disease which no one can be protected from. Although major achievements in Alzheimer's research have already been made, an effective treatment, which reduces the speed of the disease's course or fully prevents it from spreading, still has to be found in order to save millions of lives (see sections 3.6 and 3.7).

After having read literature on Alzheimer's disease as well as on the burden of caregiving, it seems safe to argue that Alzheimer's puts a great strain not only on the people suffering from the disease, but also on their families and friends as their own mental and

physical health can be seriously affected from dealing with and caring for an Alzheimer's patient.

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8 Abstract

This diploma thesis deals with the theme of Alzheimer's disease in literature. The narratives selected for illustration, i.e. the collection of short stories *The One With the News* by Sandra Sabatini, portray how Alzheimer's puts a tremendous strain on a person suffering from this disease as well as on the family members and acquaintances of an Alzheimer's patient.

Alzheimer's, a neurodegenerative, ultimately fatal disease, which no one can be protected from, affects millions of people worldwide. The number is steadily increasing and is not expected to decline as the global population continues to age and no cure currently exists. However, Alzheimer's does not only have a strong effect on patients, but also presents a great burden to their carers, who are mostly family members. To be more precise, taking care of a person suffering from Alzheimer's can result in severe mental and physical health problems. Therefore, it was only a question of time before Alzheimer's disease and the burden of caregiving were openly and extensively discussed in literature.

In the first part of this diploma thesis, emphasis is put on describing Alzheimer's, since the theoretical basis and the known medical facts of Alzheimer's are important for the later analysis of the short stories. Attention is paid to the disease's etiology, pathology, risk factors, preventative measures, and diagnostic as well as treatment options. The second part of this diploma thesis analyzes how the disease is portrayed in the chosen collection of short stories. They are all interconnected to a certain extent because they center around the same Alzheimer's patient. Each story focuses on the experiences of the family members and people living in the immediate surroundings dealing with and caring for the affected loved one. One story is even told from the point of view of the sick person, which provides a deeper insight into what it can mean to suffer from Alzheimer's and which reveals an Alzheimer's patient's possible thoughts and feelings, not only in the beginning stage of the disease, but also when Alzheimer's is already further advanced. All of the other stories put emphasis on how the disease affects the family members and acquaintances of the sufferer of Alzheimer's. Their different ways of coping with the situation they suddenly find themselves in are highlighted throughout the book.

Diese Diplomarbeit beschäftigt sich mit dem Motiv der Alzheimer-Krankheit in der Literatur. Die Sammlung der Kurzgeschichten *The One With the News* von Sandra Sabatini zeigt die enorme Belastung, die die Krankheit für einen Betroffenen, sowie dessen Familienmitglieder und Bekannte darstellt, auf.

Alzheimer, eine neurodegenerative, tödlich verlaufende Krankheit, vor der niemand geschützt werden kann, betrifft Millionen von Menschen weltweit. Die Zahl der Erkrankten steigt stetig weiter an. Ein Rückgang ist nicht zu erwarten, da die globale Bevölkerung immer älter wird und die Krankheit nach wie vor unheilbar ist. Alzheimer belastet nicht nur die Betroffenen, sondern stellt auch eine schwierige Herausforderung für deren Betreuende dar, die meistens Familienangehörige sind. Das Pflegen eines Alzheimer-Patienten kann zu schweren psychischen und auch physischen gesundheitlichen Problemen führen. Aufgrund dessen war es nur eine Frage der Zeit, bis die Alzheimer-Krankheit und die dadurch entstehende enorme Belastung der Pflegenden aufgegriffen und offen und ausführlich in der Literatur diskutiert wurden.

Im ersten Teil dieser Arbeit wird die Alzheimer-Krankheit näher beschrieben, da eine theoretische Grundlage und die bekannten medizinischen Fakten wichtig für die spätere Analyse der Kurzgeschichten sind. Hauptaugenmerk wird dabei auf die Ätiologie, Pathologie, Risikofaktoren, präventive Maßnahmen, so wie die Diagnose- und Behandlungsmöglichkeiten gelegt. Der zweite Teil dieser Arbeit analysiert, wie die Krankheit in den ausgewählten Kurzgeschichten dargestellt ist. Diese hängen miteinander zusammen, da sie sich mit demselben Alzheimer-Patienten beschäftigen. Jede Kurzgeschichte ist auf die Erfahrungen der Familienmitglieder des Betroffenen und der Personen, die im näheren Umfeld des Alzheimer-Patienten leben, fokussiert und beschreibt, wie sie mit der Krankheit umgehen und wie sich um den Kranken kümmern. Eine Geschichte wird aus der Sicht des Alzheimer-Patienten erzählt. Dadurch erfährt man, was es bedeuten kann, von dieser Krankheit betroffen zu sein. Des Weiteren lernt man mehr über die möglichen Gedanken und Gefühle, die Betroffene in den verschiedenen Krankheitsstadien haben können. Alle anderen Geschichten erläutern die Krankheit in Bezug auf die Familie und die Bekannten des Alzheimer-Patienten und zeigen auf, wie sie die Krankheit beeinflusst. Ihre unterschiedlichen Umgangsweisen mit der Situation, in der sie sich plötzlich befinden, werden im gesamten Buch hervorgehoben.

9 Curriculum Vitae

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Ausbildung:

seit 2008	Lehramtsstudium Unterrichtsfächer Englisch und Psychologie/Philosophie an der Universität Wien
2007	einsemestrige, prüfungsimmanente Lehrveranstaltung „Introduction to Philosophy“ am College of San Mateo, CA
16. Juni 2006	Reife- und Diplomprüfung
2001-2006	Handelsakademie Oberpullendorf

Berufserfahrung:

Director of Welfare (Project International)
Sprachferien für Jugendliche
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Camp-Coordinator (Sprachcaffe)
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Groupleader (SFA)
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Office Manager und Substitute Counselor (Camp Billings)
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10 Appendix

10.1 Email

From: Dale Schenk <dale.schenk@prothena.com>
Subject: Re: Alzheimer's
Date: 12. September 2014 19:42:09 MESZ
To: Nora Tuczay <nora_t@gmx.net>

Nora,
Good to hear from you! It's fairly easy to answer your questions briefly though I am not sure I have the time to answer them extensively. Here is my short version:

Achievements in AD thus far:
-Developed (together with my colleagues) the first biomarkers for AD-specifically Abeta 42 and tau together.
-Discovered soluble Abeta
-Discovered the existence of beta secretase and we also invented all of the terms of alpha, beta and gamma secretase (not commonly know actually)
-Developed together with my colleagues the first mouse model of AD
-Brought forth the concept and potential therapy of beta amyloid immunotherapy for AD

Current Research:
-Synuclein immunotherapy for potential treatment of Parkinson's disease
-AL light chain immunotherapy for treatment of cardiac AL amyloidosis
-AA amyloidosis

Outlook & focus
-AD: I think we are on the verge at long last of seeing effective treatment particularly for Abeta immunotherapy in the early stages of the disease. It's taken a great deal of time and some frustration to zero in the early aspects of the disease but in retrospect its fairly obvious in the sense that treatment of the brain prior to massive neuronal loss is likely to be much more effective than later after the damage has been done.
-Protein misfolding /other amyloid diseases-There appear to be a great number of protein folding diseases that are becoming more and more understood. It is my personal hope and passion to tackle a great number of these. AL and AA amyloidosis are two current examples that we are working hard on. By utilizing immunotherapy for these diseases, we have the potential to actually remove protein build-up from the heart and kidneys of patients that currently have very few options.
-In terms of overall outlook, I am very encouraged that our discipline of biotechnology and medicine in general has become much better in the last 5-10 years at successfully taking quality basic science and transferring it into meaningful therapeutic medicines that can help patients. Hopefully this trend will continue.

Let me know if you have any questions about any of this so that I can elaborate.

All the Best,
Dale