Alzheimer's Disease: Considerations in the Light of Transactional Analysis

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Abstract
This article is the result of a Narrative Review of literature about Alzheimer's Disease, alongside a review of transactional analysis theory with particular reference to how the injunction or injunctive message of Don't Think, and a mindless script, may be connected to the development of the disease. A plea is made that we study relationships beyond the realm of natural science.

Keywords
Alzheimer's Disease, Injunction, Script, Transactional Analysis, Narrative Review

Introduction
The longevity of the population is a reality nowadays. The possibility of prolonging life has consequences and among them is being affected by a chronic degenerative disease such as Alzheimer's Disease (AD). Several researches in biological, social and cultural areas seek to explain the causes of chronic-degenerative diseases, but little has been done in the psychological area. Although there are already indications of probable causes of AD, a cause has not been discovered so far that completely elucidates the issue so current treatment, in general, encompasses several procedures that minimise symptoms.

The scientific literature shows us that there is a large volume of publications in the area that deal with the possible causes of this disease. However, publications in the field of psychology are scarce. The psychological theory that I use is transactional analysis (TA) and by reflecting on dementia based on TA concepts, I think we can look at this disease in a broad and unprecedented way.

The increase in the number of elderly people in the general population is a worldwide reality. In developed countries, after the Second World War, there was an explosion of baby births with the return home of combatants, a period that was called the 'baby-boom', which generated after sixty years the 'age-boom'. In developing countries or even in underdeveloped countries, the expansion of access to medical services for the population, the advancement of medicine, basic sanitation, access to information, are factors that contribute to increased longevity.

In Brazil, according to the Instituto Brasileiro de Geografia e Estatística (IBGE) life expectancy over seventy years has increased by more than 30 years. In 2016, it was reported that Brazilian life expectancy is 75.8 years, with women living 6.5 years longer than men.

However, along with the possibility of living longer are the consequences of aging, including chronic degenerative diseases. Nitrini (2000) emphasises that among the dementias, (AD) is the most feared and the most prevalent. The idea that had existed for a few decades that forgetfulness or memory loss was natural in aging has been changed to the statement that memory loss is a symptom of a disease – dementia. There is a clear distinction between forgetting and memory loss; when forgetting occurs, we remember that we forgot something; in memory loss, we do not know that we have forgotten anything.
In 1990 the World Health Organization (WHO) established the decade of the brain and several researches were initiated in that decade. One of the important points of this initiative was the research into AD, mainly on the biological aspects of this disease. One of the questions on the subject concerns the fact that human diseases have environmental, biological and psychological factors involved in the illness process, but little research has been carried out on the psychological factors of AD.

TA has a robust theoretical body, with several concepts that approach and treat the human being in its entirety. In this study, I bring TA as a reference for the discussions and focus particularly on the injunction ‘Don’t think’ (Goulding and Goulding, 1976; Steiner, 1976; Berne, 1988; McNeel, 2010) as a facilitator of new understandings about the emergence of disease. The objective of this study is to establish relationships between the Don’t think injunction and the onset of AD, in order to contribute to broadening the understanding of the disease in question. The methodology used to achieve this objective was narrative review of the literature, in order to provide freedom in the choice of articles and authors most present in my practice.

**Alzheimer’s Disease**

AD is named after the German neurologist Alois Alzheimer, who in 1906 studied the brain of a 51-year-old woman whose cause of death was a rare mental illness. He found changes in the brain tissue that we now know to be compatible with Alzheimer's Disease.

AD is a progressive, irreversible, neurodegenerative disease whose onset is insidious. Its initial sign is the loss of recent memory, followed by various cognitive deficits until it affects the motor part that impairs the patient's mobility. AD does not lead the patient to death; what happens are opportunistic infections in the bedridden patient that can lead to more serious conditions such as pneumonia or urinary infections that, added to the existing situation, lead to death.

The probable causes already researched for AD (Nitrini, 2000) are: intoxication by heavy metals, genetic polymorphisms of apolipoproteins (ApoE), and several others. It is also known that individuals with Down’s Syndrome eventually develop the signs of AD around 40 years of age. However, no discovery has been able to clarify the cause and establish a treatment or prevention of the disease.

Genetic issues partly account for the onset of the disease, and clinically, the disease is divided into early-onset AD, generally linked to genetic factors, and late-onset AD that begins after age 65 years and may be familial but not genetic. Early onset cases are rare, comprising about 10% of cases, and characterised by rapid evolution and usually related to a dominant genetic pattern transmitted by successive generations (Truzzi and Laks, 2005). They report the case of a male patient, who at age 30 began to show a decline in short-term memory, with a background of having healthy parents and healthy siblings, which does not fit in the transmitted genetic pattern as there were no reported cases of dementia in the family.

Searching the SciELO, LILACS and Google Scholar databases for the words cause, etiology and Alzheimer's, no articles were found that focus on the cause or psychological etiology of the disease. There are articles that suggest probable causes in the Brazilian population, with being over 65 years old, being a woman and having low schooling (Frota, Nitrini, Damasceno, Fortenza, Dias-Tosta, Da Silva, et al., 2011; Nitrini, Caramelli, Bottino, Damasceno, Brucki, Anghinah, and Academia Brasileira de Neurologia, 2005; Machado, Ribeiro, Leal and Cotta, 2007; Almeida, 1997; Chaves, Godinho, Porto, Mansur, Carthey-Goullart, Yassuda, Beato, and Group, 2011; Zanini, 2010; Lira And Santos, 2012).

It was noticed that the most reported aspects refer to symptoms and their evaluation.

Lira and Santos (2012) report that this degenerative disease accumulates extraneuronal beta-amyloid protein plaques and intraneuronal neurofibrillary tangles. They also report that the deposition of these substances leads to the formation of local inflammation with neurotoxicity and poisonous effects in the brain. They also state that there is a loss of social and occupational performance and that these losses can be evaluated through the Mini-Mental State Examination (MMSE).

Lopes, Lima, Godoi, Barbosa and Moura (2017) also report symptoms through a psychological assessment, identifying factors that potentiate the emergence of senile dementia, this assessment being useful in the diagnosis. Zanini (2010) seeks in neuropsychological assessment to identify cognitive decline in the elderly and possible AD.

Neuropsychological assessment is one of the criteria for diagnosing AD, but age, education and cultural background should be considered in the test results, as these are factors that alter performance and have an impact on the conclusions obtained by the tests. It is important that the clinician make their own assessments because tests have limitations and have high rates of false positives. The advantage of neuropsychological assessment is to provide the clinician with results that can guide the use of drugs or treatments that modify the signs (Chaves, Godinho, Porto, Mansur, Carthey-Goullart, Yassuda, Beato, and Group, 2011).
The researched articles show clearly and in great detail that AD has cultural characteristics and it is necessary to relate diagnoses in Brazil with our culture (Frota et al, 2011; Nitrini et al, 2005; Machado Ribeiro, Leal and Cotta, 2007; Almeida, 1997). The disease mainly affects females and it is important to consider that women have a longer life than men and this indicates the need for an investigation that considers this factor. Low education is possibly a risk factor, although there are intellectually-favoured people who also have the disease (Nitrini et al, 2005; Machado et al, 2007).

The evaluation for diagnosis is well established both in the world and in Brazil and there are several exams and tests that can support the diagnosis. The stages of the disease are also well established, even considering individual differences. The proposed treatments aim to minimise the symptoms and signs, but with the knowledge we have at the moment it is not yet possible to reverse them.

**Transactional Analysis**

TA, created by Eric Berne (1958), is a comprehensive theory about the human personality, with the ability to evaluate and intervene in various aspects of life, such as how to socially structure time, how to express and deal with emotions, the adequacy of our communication as transactions or the exchange of stimuli between people, the issue of human recognition in the concept of strokes and in the relational needs or psychological hungers that we seek to satisfy. The concepts that will be addressed in this study are life script, injunctions and decisions.

One of the first decisions that the child makes concerns the existential position, which is defined as “the concept that people have of themselves and others” (Cortez, 2008, p.10). Berne (1988) referring to the existential position says that the child, when making a decision, already has convictions about themselves and their parents, so decides based on these convictions that were formed from birth, strengthened during breastfeeding, in the training to go to the bathroom and in the day-to-day with the family. Once the initial decision is made, the existential position can be changed, but it requires work and motivation. Decisions are about feeling OK or not OK, with oneself, in the relationship with the other and in the perception of the context.

From this decision, the child already has a way to elaborate their life script, which is conceptualised as “A life plan based on a decision made in childhood, reinforced by the parents, justified by subsequent events and culminating in a chosen alternative” (Berne, 1988, p.356; 1972, p.445). This definition leads to the theme of this work, questioning whether AD can be associated with a script decision. The concept and understanding of script has been expanded (Erskine, 2010) since Berne’s death in 1970, but his statements still intrigue as “The sudden appearance of a symptom is, in general, a sign of script.” (Berne, 1988, p.57). If we take it as a sudden onset symptom, can the memory loss be related to Berne’s comment and can it be referred to as a script sign?

“It is incredible to think, at first, that man’s fate, all his nobility and all his degradation, is decided by a child no more than six years old, and usually three, but this is what script theory claims.” (Berne, 1988, p.57; 1972, p.53). Regarding fate being decided at such an early age, considerations can be made about what kind of stimuli or events could generate such a decision. Could the child, faced with an acute unmet need, decide something like – What I think is not correct, and then decide to stop thinking?

Steiner (1976) differs from Berne on the question of the script being unconscious, as he states that “Script analysis can be called decision theory rather than a disease theory of emotional disturbance. Script theory is based on the belief that people make conscious life plans in childhood or early adolescence which influence and make predictable the rest of their lives (Steiner, 1976, p.33; 1974, p.28).

A script has several elements that combine to result in the outcome. The focus element of this article is the concept of injunction, which is defined in the Glossary as “a prohibition or a negative command from a parent” (Berne, 1988, p.354; 1972, p.443). For Steiner (1976) the “injunction is always the denial of an activity” (p.65), and he also says that the injunctions vary in area of restriction or malignancy. Berne (1988) classifies injunctions into three degrees – “first degree are socially acceptable and mild … second degree ((devious and tough) … and third degree (very rough and harsh)” (p.102; 1972, p.113-4). Children accept the injunctions to keep themselves in their parents' good graces, to be loved, accepted, and to have their needs met.

An important contribution on script formation can be found in Erskine and Morsund (2003) who write “we are social creatures who have our being within a sea of relationships” (p.33). They write that a baby at birth will have all learning from relationships, especially with the mother. The construction of emotions begins with affection and, in order for it to become an emotion, it is necessary for another person to resonate with our feelings, so emotions arise and are experienced in a relational context. Language also takes place through relationships and, from language, thought will be determined. What we capture from the sense organs and how we cognitively represent these data is through the social,
usually as transmitted by the people with whom we learn to communicate.

Erskine and Moursund also say that "our thoughts are inevitably based on and affected by our emotions, and our emotions are channeled and made sense by our thoughts" (p.61). Learning takes place a great deal in a person's life and in childhood especially it is mediated by other people. This huge amount of information needs to be structured to avoid confusing data that we would not be able to use. This organisation of information is structured in schemas "...they make up an internal system of categories and procedures that allow us to navigate through, and make sense of, the clutter of data available to us at any given moment" (p. 35). Schemas have a cognitive component, but include emotions and behaviors in addition to physiological responses.

Erskine and Moursund comment that the importance of schemas is that they can be together with script patterns. Schemas are necessary and help us to organise experiences, to promote internal and environmental responses. However, there is a difference between schemas and script: schemas are more permeable, possible to be updated through new experiences, whereas scripts are more closed to changes. The script maintains itself through defence mechanisms, and therefore they are more impermeable. Scripts are out of consciousness, they prevent us from growing, changing and establishing new forms of relationships, they are self-perpetuating and lead us to repeat behaviors, thoughts and feelings according to our expectations in the face of situations.

The script decision comes in times of pressure and the child resorts to all possible sources of adaptation, modifying their expectations and trying to align them with the realities of the situation at home (Steiner, 1976). Making a decision relieves pressures and 'resolves' them in the short term, but over the course of existence this can become totally inadequate and out of place in relation to situations.

"The decision has a number of components: the existential position or racket that is embraced at the time of the decision; the sweatshirt; the mythical hero [or heroine] chosen to live out this position; the somatic component which bodily reflects the decision; and the actual time of the decision." (Steiner, 1974, p.109). The somatic component can be observed, in the opinion of Steiner, mainly in the musculature, because the injunctions and attributions unbalance the body, because the energy can be blocked in some parts of the body and overactivated in others. "Each script has its peculiar combinations of somatic expressions, physiological strengths and weaknesses which often imitate, as

has been stated previously, the bodily posture and shape of mythical heroes (Steiner, 1976, p.97; 1974, p.113)

Steiner (1976) makes a classification of scripts into tragic or hamartic, and banal. For him, there are three ways to reach tragedy: a depression so severe that it can lead to suicide, going crazy or becoming addicted to some kind of drug. The corresponding scripts are: loveless, mindless, joyless. For this study we are interested in the script of lack of mind or madness. The fear of madness is present in a large number of people and can be characterised "... such as the incapacity to cope in the world, the feeling that one has no control over one's life... Is based on early childhood injunctions which track the child's capacity to think and to figure out the world. Training against the use of the Adult in the early years of life is the foundation for the mind script with the discounting transaction as its cornerstone."(p.82; 1974, p.92-93).

Steiner (1976) talks in this chapter about training in mindlessness, and brings up the importance of discounts and lies that prevent people from being able to understand themselves. A look at ego states, conceptualised as a consistent pattern of feeling and experience directly related to a corresponding consistent pattern of behaviour, shows us that discounting covers both the Adult ego state, A2 in its rationality, and the Adult in the Child, A1 which is intuitive.

Intuition is part of everyone. We are able to look and see if a person is sad or happy, but when we seek feedback on our intuition, it is not always confirmed, and after several discounts, we may conclude that we don't know. Discounting encompasses personal emotions, rationality, intuition, and these discounts start very early on, for example, when we say to Mother, "Are you crying?" and she replies" No, it was something in my eye."

Lies in Steiner's view, which I share, are the rule rather than the exception. Parents lie to children, teachers lie, governments lie, companies lie, by claiming that such a product will make me happy, so there is a chain of lies at various levels and relationships. Thus, lies and discounts "erode children's understanding” (Steiner, 1976, p.129). “Lying and secrecy are powerful influences in scripting for Mindlessness, and lies along with discounts are capable of producing the kind of mental confusion that is called "schizophrenia", and which I prefer to call madness. (Steiner, 1976, p.133; 1974, p.159-160).

Goulding & Goulding (1976) do not agree with Berne (1965) on how injunctions are inserted into children's heads and others report that it is really not clear in the texts about this statement. For example, Bertuol
McNeel (2010), continuing the study of injunctions, called them injunctive messages and expanded Goulding and Goulding's (1979) 12 to 25. McNeel believes that there are two central decisions for each injunctive message “a despairing decision and defiant decision” (p.159). The defiant decision is a healthy child's creative attempt to resist the message and dominate the circumstances. The despairing decision represents the conclusion the child arrives at, faced with an injunctive message that something is wrong with himself. (p.159). For McNeel the injunction defined by Goulding and Goulding can be expanded to “messages that emanate from parental figures, often unconscious, that are negative in content, often passed in a context of prohibition and nullifying the natural impulse of existence, attachment, identity, competence and security. (p.163). He goes to write that “all beliefs generated by individuals in response to injunctive messages are erroneous, because all Injunctive messages are lies” (p.166). The power they have is generated by the person's belief that this lie is true.

Injunctions and decisions are distinct concepts. Goulding & Goulding (1976) explain that injunctions can be given by parental figures, but can also arise as a choice of the child themself and can be both real and imaginary. They claim that they disagree with Berne about the injunction being inserted as an electrode in the child's mind. In addition, the same injunction can produce different reactions in children, considering the individuality of each one.

Decisions are made daily by people, these decisions are usually of limited time and solve or change the situation and can be modified with new information. They are decisions of A2, which evaluates the options and decides through the secondary thinking process. However, the decisions that will be part of the personality are childish decisions, usually taken through A1, as they occur early with magical thinking and the information gaps are usually filled with fantasies. (Allen, 2011)

One of the injunctions cited by Goulding & Goulding is Don't Think and there can be variations like: Don't Think About It, Don't Think What You Think – Think What I Think – said by the parents – and various decisions such as: I am stupid, I don't know how to think for myself, It's better not to think that again, I'm always wrong, I won't open my mouth until I find out what others think. These injunctions, and the resulting decisions, promote people who, in general, let their partners take responsibility for thinking and making decisions, establishing symbiotic relationships.

For McNeel the injunctive message Don't think is linked to the competence group and this group of messages promotes difficulties that may not seem like total disadvantages. Those with this message are people focused on creating big and small problems, they put themselves to the test in all situations; they are strong-minded, even arrogant. This message can be seen with the following decisions: despairing decision – what the person is afraid is true – “I feel inadequate”, or defiant decision – “I will force others to think as I do” (p.178). Regardless of the decision, the person will be linked to the injunction and through its development will be able to live with one of them for an entire existence, being able to alternate them.

Finally, for Berne (1988) “Vitality in old age depends on three factors: 1) Robustness of constitution; 2) physical health; 3) Script type”. (p.161). The robustness of constitution is greatly influenced by genetics, and physical health, by the care that the person has had throughout their life, such as healthy eating, physical exercise, expression of emotions, satisfactory work and others. About the type of script, we must reflect on early decisions, on existential position and responses to injunctions.

Conclusions

If we take as an example a person whose life was structured based on the injunction Don't think, even if they had an adequate life, solved daily problems, worked, started a family, it may be that in old age, this injunction is more present so that they don't have to think about the changes that aging brings. They don't have to accept the fragility of the body, the deterioration of youthful beauty, the fact that they are no longer totally necessary for children, parents, the work to which they have been dedicated and so many other aspects. Could a person who heard from their parents, for example, "Work right or I'll blow your brains out", when they retire and leave the production process, then “blow their own brains out” and go insane? The most common ideas about old age, among many, are that one is no longer useful, that many losses occur, that one gets sick, and so on. All these beliefs are quite heavy to experience and accept, even more so if the person doesn't feel good about themself. Thus, the change from the Challenging Decision to the Desperate Decision can occur, which in my hypothesis can facilitate the appearance of AD.

For several years, in my work with family members of AD patients, the most common perception and understanding is that patients do not express their emotions and feelings, hardly touch family members...
with hugs and kisses, are rigid in their ideas, are terrified of getting old and show themselves to be extremely vain, either physically or intellectually. These facts lead me to think that, despite the existence of the entire biological framework for the emergence of the disease, there is also an emotional/psychological factor that accentuates the development of AD, and that may be the injunction Don't think - not having to think about the losses that generally occur in old age, not having to think about their lack of usefulness, the transformation of their social and family relationships, the loss of physical or intellectual attributes.

This person may have lacked hope, faith in the road of life, and lacked the perception that changes occur daily and that aging can be a period of new searches, new interests, and lacked the conviction that we can always become wiser, not intellectually but in the understanding of life and, consequently, of death.

Final considerations
The evolutionary development of human beings actually occurs from the relationships they establish, initially with parental figures, then with their professional and family school relationships. However, all learning encompasses cognition, emotion, and thoughts, and all of these are intimately connected. The imbalance in one of them may promote changes in the person's way of life. This imbalance can occur in the face of a high stress situation, or when reality imposes itself on the person's most primitive beliefs, affecting their life schema and consequently their script.

It was not possible to say that the injunction or the injunctive message Don't think will determine dementia by itself, but considering my experience with these patients, I think it can facilitate the onset of the disease, especially in the case of the change from the Challenging Decision to the Desperate Decision, because the person is ‘full of certainties’ and a reality confrontation can lead them not to think.

In AD there is an unknown area not yet visited by science. Of the various aspects that are still in the shadows, there are those that are not within the scope of biophysiology and that, given the urgency of stopping the progress of the disease, were not prioritised. I believe it is our responsibility, as psychologists, to research elements that, together with those already identified, can bring more light to AD, clarifying the still obscure points. If we stick to what is already outlined by science, we will not advance. We need to blaze trails in this unknown territory, gather data, connect these same data with other possibilities and alternatives. The present study, I admit, is an act of daring. Studying relation-ships that seem to be outside the realm of natural science logic is to start a promising move, but it is still daring.

Ede Lanir Ferreira Paiva is accredited by UNAT as a Transactional Analysis Teacher in the area of Psychotherapy, a Certified Transactional Analyst in the areas of Psychotherapy and Education, and a Psychologist with a specialisation in Gerontology. She can be contacted at edelanirf@gmail.com

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