Research and Practice 2

The "Time Travel" paradigm of Alzheimer's Disease for Family Care Partner Empowerment

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Key highlights:

- Instead of neatly moving through stages, AD persons experience traveling in a downward spiral back and forth through time to eventually travel back to their earliest years
- The Time Travel Model is a more useful tool for understanding and explaining AD to caregivers
- Care partners are empowered by learning how to join their loved one in the approximate time frame they are in.
- The Time Travel Model of AD connects to validation therapy and allows care partners to become "best friends" to the AD person by avoiding imposing their time frames on them.

For decades, Alzheimer's disease (AD) has been considered the disease of the century (Aver et. al., 1994; Better, 2024). In this article we would like to describe how family care partners are taught the Time Travel model of AD and how it can be used for person-directed and relationship-centered living (Power, 2014). Everyone is familiar with different stage models of AD, varying from 3 to 7 Stages, especially Barry Reisberg's 7 Stage model (Reisberg, 1986; Reisberg et. al, 1986). It is very helpful to identify the deficits associated with each approximate stage. However, persons with AD seem to vary from day to day from one stage to another in their recall of loved ones' names and faces (Dastoor & Cole, 1985). Such fluctuations in cognition can be puzzling and stressful for both family and professional care partners, who are often taught to view Alzheimer's as regression through stages or sub-stages from diagnosis to death (Reisberg, 1986; Reisberg et. al, 1982). Stage models of AD suggest the person with AD neatly progresses from one stage to the next (Zou et. al, 2023) although stage markers fail to show caregivers how the disease works.

Trip back in Time Model of Alzheimer's Disease: Our Time Travel Model of AD suggests conceptualizing AD as a "trip back in time"; this helps care partners understand variations in identity which relate to such things as connections to significant others, memory, behavior, and physical abilities (Johnson & Johnson, 2000a, 2000b; Johnson, C. et. al, 2017; Territo, 2022). Caregivers need training to develop hope regarding what can be achieved with AD persons, finding their strengths and meeting their needs for quality of life (Woods, 2012). Caregiver understanding of Time Travel can make a valuable difference for both the patient and caregiver.

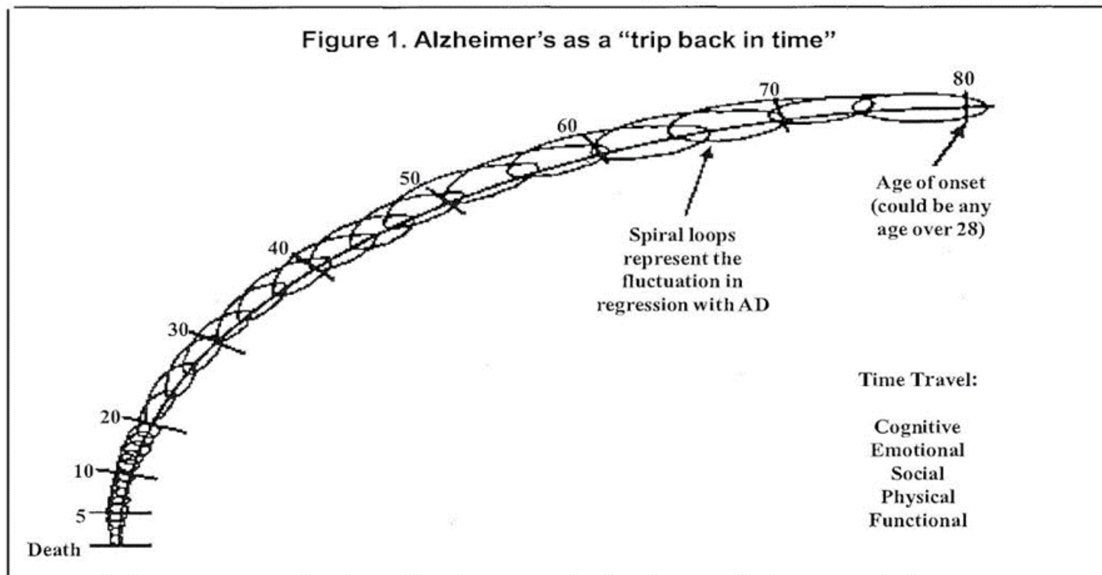
Clinical observations suggest that persons with AD experience the following kinds of time travel (Johnson et. al., 2017: Johnson & Johnson, 2000a, 2000b;): **Cognitive Time Travel:** Short term memory loss is followed by long term memory loss. As they travel back to different ages through their life, they remember details specific to that time frame which can be positive or negative. Concomitantly, the AD person often goes through what's labeled as "personality change" in a "trip back in time" from adulthood to infancy; **Emotional Time Travel**: Rational thinking is reduced as time travel goes back to childhood, and concurrently the AD person becomes more in touch with their emotions. Child psychologists paradoxically suggest that infants are more emotionally in touch and honest about feelings than adults; **Social Time Travel:** Past self, people, places, and things have meaning whether positive or negative based upon where they are on their "trip back in time". Reality orientation which imposes the present time frame on the AD person may be frustrating for them while legitimates their cognitive world; **Physical Time Travel:** At first, they have normal physical strength which typically turns into superphysical strength; this is followed much later by psychomotor impairment with falling, swallowing difficulties, and choking. Eventually the AD person is no longer able to ambulate which is consistent with traveling to the earliest years of life, bedridden, curled up in a fetal position simialr to a womb-like state; and **Functional Time Travel:** Activities of daily living change through time which limits independence. Movement from verbal to non-verbal communication is the norm. Hence, communication patterns are lost in a similar way in which they are gained from infancy to adulthood (Johnson, C. et al, 2017). All of these aspects of Time Travel do not operate neatly in stages as stage theories often imply.

The "trip back in time" paradigm (cf. Figure 1) uses aspects of Piaget's theory of development in reverse (Javed, S., & Kakul, F. (2023), Reisberg and

associates' Functional Assessment Staging (FAST) and Global Deteriation Scale (GDS) assessments (Reisberg et. al, 1986; Reisberg, 1982), and other cognitive, behavioral, and affective studies on AD (Johnson & Johnson, 2000a). Using past research to illustrate functional decline in AD, this model goes further to advance a non-linear time travel conceptualization of AD. This paradigm of AD as "time travel" uses connecting loops spiraling downward to depict the fluctuating trip back in time. Previous theoretical frameworks have tended to rely solely on fixed-stage regression models of AD (Reisberg, 1982). The insight this model provides will hopefully increase gerontologists and caregivers' understanding of AD and provide new strategies for caregivers in the future.

Individuals with AD experience cognitive, emotional, social, physical and functional time travel, and families learn how to join them on their journey. Stage models (e.g., Reisberg and associates FAST and GDS) of AD clarify how changes through time occur using stage markers (Reisberg et al., 1986), but the disease is non-linear. AD persons don't travel neatly in stages but fluctuate in recall of names, faces and events. They migrate in a non-linear, downward spiral through time, revisiting people, places, events and traumas of their distant pasts (Johnson, C., et al, 2017). Time Travel apps and other life history data are available to provide individulaized care (PCC) that is timely and appropraite. Families are trained to connect in the approximate time frame in which the AD person has traveled by understanding both the stage markers and the non-linear trajectory of progression. Hence, care partners are taught time appropriate communication and interventions (e.g., activities, pictures, music, etc.) to respond to challenging behaviors. Care partners can help to validate the current time frames of their AD loved ones which can be empowering as validation therapy has shown (Sánchez-Martínez et. al, 2023). Family carers are inspired to become "best friends" of AD persons by understanding how this cognitive disability works (Stuckey, 1997). When an individual with AD travels to age 20 in their mind but sees an 80-year-old face in the mirror, they might demand caregivers leave the bathroom which can be puzzling behavior for families. The Time Travel model explains how this works and informs care planning, redesigns (e.g., mirrors) and activities. The paradigm supports validation therapy, "Best Friends" and other non-pharmacological interventions (Li et al, 2023). Achieving social inclusion for AD persons requires the development of dementia supportive communities which meet persons with AD in their time frames, while taking part in a wider range of valued activities.

[Figure 1}



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