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# Self-defining Future Projections in normal Ageing

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## INTRODUCTION :

Self-defining future projections (SDFP) are mental representations of plausible and highly significant future events that provide core information for one's understanding of self. The current study's first aim was to better characterize SDFPs' dimensions in "young-old" adults in a larger sample than in previous research. To our knowledge, this was the first time that some characteristics of these future projections (tension, redemption, contamination, personal importance) were targeted and that potential interrelations between the most salient dimensions of SDFPs were explored. Secondary objectives were to establish correlations between clinical and cognitive variables and characteristics of SDFPs.

## MATERIALS AND METHODS:

### Participants:

The sample was composed of 87 older adults (56.3% female), all native French speakers, aged from 60 to 75 years ( $M = 66.3$ ,  $SD = 4.3$ ). Participants were all retired, non-institutionalized, and managed their own households. Participants averaged 13.3 years of education ( $SD = 2.9$ ), and their mean MMSE score was 28.7 ( $SD = 1.7$ ). 65 of them (74.7%) were married and lived as a couple; 18 others (20.7%) were divorced or widowed and lived alone, whereas four participants were unmarried.

### Measures:

**SDFPs questionnaire:** participants were asked to imagine and write down three SDFPs according to the definition developed by D'Argembeau et al. (2012). The data were coded by the authors for specificity, integrative meaning, tension and thematic content. The content of each future projection was evaluated using the classification defined in Thorne and McLean's scoring manual (2001) (French translation: Lardi et Van der Linden, 2006). Seven categories were distinguished that were mutually exclusive: life-threatening events, recreation or exploration, relationships, achievement/mastery, guilt/shame, drug/alcohol abuse, and "events not classifiable" i.e., a projection that did not fit into the previous categories. We used two additional contents related to normal ageing that were not present in the classical manual: "dependence" (representing physical or mental decline) and "death or end-of life", whether concerning the narrator or someone else. Then, participants had to rate their emotional response while imagining the event and the personal importance they attach to it. Finally, they had to estimate the delay between the present time and the event in order to obtain a measure of the time frame.

**Clinical scales:** participants were screened for anxiety, depression, and self-esteem using the 14-item Hospital Anxiety and Depression Scale and the 10-item Rosenberg self-esteem scale.

**Cognitive tests:** two tasks evaluating executive functions were administered. The first one was a phonemic verbal fluency. The second executive task was the similarity subtest (WAIS IV).

### To be considered as an SDFP, an event should:

- (1) be likely to occur in a year or more;
- (2) be important and help oneself and significant others to understand who the participant is as a person;
- (3) be vividly represented;
- (4) reflect important concerns or goals in the participant's life and be related to other events sharing the same theme;
- (5) be either positive or negative and generate strong feelings;
- (6) be an event that the participant has thought of about many times.

## RESULTS:

- The descriptive characteristics of the 261 SDFPs collected among the 87 "young-old" adults are reported in Table 1.
- No gender difference emerged in the dimensions of SDFPs ( $p > .05$ ).
- No difference was observed for integrative meaning and tension between specific and nonspecific narratives (Table 2,  $ps > .10$ ).
- In addition, specific SDFPs were not related to thematic content (Table 3).
- Significant differences were observed between integrated and nonintegrated future projections for several dimensions.
- Thematic contents providing from most to least integrative meaning statements were achievement, life-threatening relationships, and leisure events.
- Participants did not suffer from anxious or depressive disorders; we found a negative correlation between depression scores and length of narrative and personal importance.

Table 1. Descriptive analyses of the SDFPs (n = 261).

	%
Specific SDFPs	11.5
Integrative SDFPs	32.6
SDFPs with tension	8.8
SDFPs with contamination	0.4
SDFPs with redemption	0.0
<b>Thematic content</b>	
Life-threatening events	5.0
Leisure events	38.3
Relationships events	27.2
Achievement events	15.7
Guilt or shame events	0.4
Drug, alcohol or tobacco use events	0.0
Non-classifiable events	13.4
<b>Additional thematic content</b>	
Dependence	11.9
Death or end of life	10.3
<b>Emotion</b>	
SDFPs with positive affect	85.1
SDFPs with neutral affect	8.0
SDFPs with negative affect	6.9
<b>Mean (SD)</b>	
Positive Emotion (/6)	4.9 (1.41)
Negative Emotion (/6)	1.1 (1.72)
Emotional value (/6)	3.8 (2.69)
Personal importance (/7)	5.6 (1.22)
Temporal distance (years)	2.8 (3.20)
Age at time of event (years)	69. (5.3)
Number of words	40.7 (25.5)

Table 2. Frequency or mean of the 261 SDFPs regarding main dimensions.

Characteristics of SDFPs:	Number of SDFPs	Specificity (%)	Integration (%)	Tension (%)	Positive SDFPs (%)	Neutral SDFPs (%)	Negative SDFPs (%)	Emotional Value	Personal Importance	Temporal Distance (Years)	Number of Words
Specific	30	100	40.0	6.7	93.3	3.3	3.3	4.60	5.57	2.29	41.4
Non-specific	231	0	31.6	9.1	84.0	8.7	7.4	3.72	5.60	2.86	40.6
Integrated	85	14.1	100	14.1	75.3	15.3	9.4	3.03	5.58	2.53	54.8
Non-integrated	176	10.2	0	6.3	89.8	4.5	5.7	4.19	5.60	2.92	33.1
Tensed	23	8.7	52.2	100	30.4	26.1	43.5	-0.57	5.25	3.60	51.7
Non-tensed	238	11.8	30.7	0	90.3	6.3	3.4	4.25	5.63	2.72	39.7
Positive	222	12.6	28.8	3.2	100	0	0	4.75	5.66	2.58	40.3
Neutral	21	4.8	61.9	28.6	0	100	0	0	5.63	2.95	44.5
Negative	18	5.6	44.4	55.6	0	0	100	-3.17	4.84	5.33	41.0
With Dependence	31	3.2	35.5	6.5	64.5	19.4	16.1	1.93	5.77	6.08	40.5
Without Dependence	230	12.6	32.2	9.1	87.8	6.5	5.7	4.08	5.57	2.35	40.8
With Death	27	11.1	48.2	22.2	59.3	14.8	25.9	1.59	5.76	6.48	41.8
Without Death	234	11.5	30.8	7.3	88.0	7.3	4.7	4.08	5.58	2.38	40.6

Table 3. Frequency or mean of the 261 the SDFPs regarding thematic content.

Event content	Nb of SDFPs	Specificity (%)	Integration (%)	Tension (%)	Depend. (%)	Death/end of life (%)	Positive SDFPs (%)	Neutral SDFPs (%)	Negative SDFPs (%)	Emo. Valence	Personal Importance	Temporal Distance (years)	Age at Time of Event (years)	Number of Words
Leisure	100	15.0	22.0	3.0	6.0	2.0	96.0	3.0	1.0	4.76	5.44	2.10	68.5	39.7
Relationship	71	12.7	38.0	2.8	11.3	12.7	86.0	7.0	7.0	4.15	6.03	2.70	66.1	39.8
Achievement	41	4.9	53.7	12.2	22.0	12.2	75.6	14.6	9.8	2.95	5.33	3.31	69.6	51.6
Non-classifiable	35	5.7	20.0	14.3	14.3	8.6	85.7	8.6	5.7	3.46	5.41	2.88	70.7	33.9
Life-threatening	13	15.4	46.2	61.5	23.1	61.5	30.8	23.1	46.1	-1.15	5.80	6.91	72.0	38.7
Guilt/shame	1	-	-	-	-	-	-	-	-	-	-	-	-	-

Depend: Dependence events.

Table 4. Correlations (Spearman) between clinical and executive measures and dimensions of SDFPs (n = 87).

	Depression	Anxiety	Self-esteem	Verbal Fluency	Similarities
Specificity	-0.03	<b>-0.22*</b>	0.16	0.03	-0.07
Integrative meaning	-0.05	<b>-0.23*</b>	<b>0.24*</b>	0.19	0.14
Tension	0.03	-0.06	0.04	0.18	<b>0.24*</b>
Dependence events	-0.01	0.04	-0.04	-0.14	<b>-0.31*</b>
Death or end of life events	-0.09	0.09	-0.05	-0.11	<b>-0.27*</b>
Importance	<b>-0.38**</b>	0.06	<b>0.24*</b>	0.01	-0.09
Number of words	<b>-0.29*</b>	-0.20	<b>0.24*</b>	<b>0.35*</b>	<b>0.21*</b>

Note: \* $p < 0.05$ ; \*\* $p < 0.001$ .

## DISCUSSION:

This study has described new elements associated with the identity function of thinking about the future in normal ageing. Probably, integrative meaning is the most salient dimension in older retired adults' SDFPs and its high frequency is related to higher self-esteem and lower anxious disorders. "Young-old" people are mostly simulating their self through leisure or relationship events in the close future, but their meaningful projections mostly concern achievement experiences. In older individuals, high executive functioning levels are also important factors to simulate tensed future events and to consider withstanding difficult events, and so they help to get a successful ageing.

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