The Aging Self in a Cultural Context: The Relation of Conceptions of Aging to Identity Processes and Self-Esteem in the United States and the Netherlands

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Objectives. To study the aging self, that is, conceptions of one's own aging process, in relation to identity processes and self-esteem in the United States and the Netherlands. As the liberal American system has a stronger emphasis on individual responsibility and youthfulness than the social–democratic Dutch system, we expect that youthful and positive perceptions of one's own aging process are more important in the United States than in the Netherlands.

Methods. Three hundred and nineteen American and 235 Dutch persons between 40 and 85 years participated in the study. A single question on age identity and the Personal Experience of Aging Scale measured aspects of the aging self. The Identity and Experiences Scale measured identity processes and Rosenberg's scale measured self-esteem.

Results. A youthful age identity and more positive personal experiences of aging were related to identity processes and self-esteem. These conceptions of one's own aging process also mediate the relation between identity processes and self-esteem. This mediating effect is stronger in the United States than in the Netherlands.

Discussion. As expected, the self-enhancing function of youthful and positive aging perceptions is stronger in the liberal American system than in the social–democratic Dutch welfare system. The aging self should therefore be studied in its cultural context.

Key Words: Age identity—Cross-cultural differences—Identity processes—Perceptions of aging—Personal experience of aging—Self-enhancement.

AS people age, they contribute to their development through the perceptions, experiences, and interpretations of their own aging process. In this paper, we define the aging self as the conception of one's own aging process, a process related to but distinct from people's concepts about their bodies (physical self), their psychological qualities (personal identity), and their social relations (social self). Although considerable research in psychosocial gerontology examines how people maintain or change their self-concepts as they age, the concept of the aging self, or one's personal sense of growing older, is relatively new (Diehl & Wahl, 2010). The aging self refers to personal conceptions about one's own aging process constructed in relation to one's sociocultural context (Westerhof & Tulle, 2007). Thus, we sought to compare the relationship of the aging self to broader processes of self and identity construction in the United States and the Netherlands.

BACKGROUND

The Aging Self

We regard all aspects of the awareness, perception, experience, evaluation, interpretation, and identification with one's own aging process as part of the aging self. Youthful age identity, one of the most widely studied aspects of the aging self, can be defined as feeling younger than one's chronological age (Westerhof & Barrett, 2005). Older adults typically report that they feel younger than their chronological age (Barak & Stern, 1986; Gana, Alaphilippe, & Bailly, 2004; Goldsmith & Heiens, 1992; Montepare & Lachman, 1989; Pinquart, 1997). In a nationally representative cross-sectional study on midlife development in the United States (MIDUS), almost no discrepancy occurs for 25-year olds, whereas 75-year olds feel about 15 years younger than their chronological age (Westerhof, 2008). Recent longitudinal evidence supports these findings (Kleinspehn-Ammerlahn, Kotter-Grühn, & Smith, 2008; Uotinen, Rantanen, Suutama, & Ruopplia, 2006). Moreover, a more youthful age identity is related to better well-being and mental health (Barak & Stern, 1986; Keyes & Westerhof, in press; Westerhof & Barrett, 2005). Having a youthful age identity also predicts better cognitive and physical functioning and even longevity (Demakakos, Gjonca, & Nazroo, 2007; Schafer & Shippee, 2010; Uotinen, Rantanen, & Suutama, 2005).

However, a youthful age identity is only one aspect of the aging self. Perceptions and experiences of one's own aging process refer to the meaning of different aspects of the aging process as they relate to one's own person. As is true for the aging process, the aging self is multidimensional and multidirectional. Qualitative and quantitative studies have indeed shown that people associate both gains and losses with their aging process, but these vary by domains of functioning

(Heckhausen, Dixon, & Baltes, 1989; Keller, Leventhal, & Larson, 1989). In the German and Dutch Aging Surveys, two nationally representative studies of the second half of life, the personal experience of aging consisted of three dimensions: physical decline, social loss, and psychological growth (Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001; Westerhof, 2003). These three dimensions related differentially to personal and social resources, including education, social relations, and health. The German and Dutch Aging Surveys also showed that a more positive aging experience is related to higher subjective well-being. In a longitudinal follow-up of the German Aging Survey, it predicted physical functioning (Wurm, Tesch-Römer, & Tomasik, 2007). Other studies have also shown that positive self-perceptions of aging predict better functioning in later life (Levy, 2003).

Identity Development and Self-Enhancement

Identity Process Theory (IPT; Whitbourne, 1986a) proposes that individuals integrate their experience of aging into their psychological sense of self, or personal identity, through a set of processes that operate continuously over time. IPT merges Piagetian and Eriksonian concepts to understand identity development as a set of interacting processes (Whitbourne, 1986a). According to IPT, individuals use three identity processes in negotiating new experiences associated with the aging process throughout adulthood. Through "identity assimilation," adults attempt to maintain a sense of continuity of the self over time as they confront age-related physical, cognitive, and social changes. Thus, through identity assimilation, adults interpret identity-salient experiences in terms of previously established cognitive and affective schemas about the self. "Identity accommodation," the second identity process, involves a change in identity in response to new experiences that are discrepant with existing self-schemas. Through identity accommodation, individuals view themselves differently as they confront experiences that contradict their current sense of self. In "identity balance," the third identity process, individuals make changes in their identities to incorporate age-relevant experiences but nevertheless maintain a consistent view of the self. Thus, as they age, they are able to reflect and evaluate themselves realistically.

These identity processes can be seen as theoretically related to the aging self (Sneed & Whitbourne, 2005; Whitbourne & Sneed, 2002). Identity assimilation and balance protect individuals from the harmful consequences of seeing themselves as getting older in a youth-oriented culture. Through these processes, individuals can maintain a consistent sense of self and therefore feel less negatively affected by the valuing of youth in their culture. By contrast, identity accommodation results in an adaptation of one's identity in line with prevailing cultural models and therefore leads the individual to have a less youthful age

identity and therefore a more negative experience of aging (Sneed & Whitbourne, 2005; Whitbourne & Sneed, 2002).

Youthful age identities and positive experiences of aging can further be explained in terms of social–cognitive theories about the self. These theories hold that cognitive processing of information about oneself is biased and driven by self-enhancement: the desire to maintain or improve self-esteem (Sedikides & Strube, 1995). However, self-esteem of aging individuals is threatened in a culture that strongly values youthfulness at the expense of old age (Gana et al., 2004; Staats, 1996; Westerhof, Barrett, & Steverink, 2003). Identifying with younger ages and maintaining a positive experience of one's own aging process can thus be seen as positive illusions that contribute to self-esteem in this context. A relation between a younger age identity and higher self-esteem indeed exists (Barak & Stern, 1986; Gana et al., 2004). As such, we expect that a younger age identity and a more positive experience of aging will be related to higher levels of self-esteem.

Identity development and self-enhancement are related as well. Empirical studies have shown that identity assimilation and balance are positively related to self-esteem in later life, whereas identity accommodation is negatively related to self-esteem (Whitbourne, Sneed, & Skultety, 2002). The aging self may be seen as contributing to these relations between identity processes and self-esteem (Sneed & Whitbourne, 2003; Whitbourne et al., 2002). In contrast to identity accommodation, the processes of identity assimilation and balance would result in more youthful and positive experiences of aging, which in turn serve to enhance the self. According to such a model, the individual's identity processes affect his or her conceptions of getting older. People who use identity assimilation would, in a youth-oriented society, continue to see themselves as youthful to protect themselves from negative self-esteem (Sneed & Whitbourne, 2003). Older adults who use identity accommodation would see themselves as getting older and, if living in a society that attributes negative value to aging, would interpret this perception as negative, hence lowering their self-esteem.

Cultural Differences

Self and identity are intrapersonal constructs, but they are at the same time social constructions (Stets & Burke, 2003). Sociocultural factors also play a crucial role in affecting the way in which individuals see themselves as changing in later life (Ryff & Marshall, 1999; Westerhof & Tulle, 2007). Modernization theory links the cultural pattern that celebrates youth at the expense of old age to the decline of the social status of older persons, which, in turn, results from shifts in social structures and economic forces in Western countries (Cowgill & Holmes, 1972; Fry, 1996). However, the modernization process is attached to different welfare regimes in the United States than in the European countries,

such as the Netherlands. In this section, we will explain how these sociocultural forces might be related to the aging self.

In his classic work, Esping-Andersen (1990) distinguishes among three different types of welfare regimes: liberal, corporatist, and social–democratic. The American system is a clear example of the liberal system (Arts & Gelissen, 2002; Esping-Andersen, 1990) embodying individualism and the primacy of the market. Citizens are individually responsible for their own benefits, such as pensions and health insurance. Although systems of social benefits do exist, they are means tested. Esping-Andersen classified the Dutch system as a social–democratic system, although empirical evidence shows that it is not an ideal type (Arts & Gelissen, 2002). The social–democratic system distributes social benefits as a matter of rights and is based more on solidarity than on individual responsibility.

These different welfare systems also have consequences for aging. Individuals growing older in the liberal American system are more responsible for planning for their later years and for remaining economically productive. In such a system, youthful and positive perceptions of aging are highly important for remaining of value to society. By contrast, the Dutch system is highly age graded: Retirement is mandatory at age 65 and consists of a single transition from nonretired to retired. These strict age regulations make it more difficult for people to deny that they are getting older or to disguise their age. However, given the stronger solidarity in the Dutch system, it is less important for Dutch individuals to maintain youthful and positive conceptions of their own aging process because old age is not devalued to the extent it is in the United States.

Some national comparisons have provided indirect evidence for this line of reasoning. Although youthful age identities exist on both sides of the Atlantic, Americans have even younger age identities than their European counterparts (Uotinen, 1998; Westerhof et al., 2003). Furthermore, youthful age identities are more strongly related to subjective well-being in the United States than in Germany (Westerhof & Barrett, 2005).

These studies suggest that it is important to study the aging self in its cultural context. Few studies in psychosocial gerontology employ cross-national comparisons. The present research tests the relationship between context and the ways in which people construct a sense of growing older, adapt their identities, and enhance their self-esteem.

Hypotheses

Building on the theories of identity processes, self-enhancement, and the social construction of self and identity, we derive two sets of hypotheses for the present study. The first addresses the relations among identity processes, conceptions of the aging self, and self-esteem. We hypothesize that identity assimilation and balance will be related to higher self-esteem, whereas the opposite will be true for

Table 1. Sample Characteristics in the United States (USA; N = 319) and the Netherlands (NL; N = 235)

	USA, %	NL, %	χ^2
Age group (years)			
40–54	41.7	31.5	11.8**
55–69	36.1	33.6	
70–85	22.3	34.9	
Sex			
Female	61.4	50.2	6.9**
Education[a]			
Higher	45.8	41.3	1.1
Employment status			
Employed	68.0	45.5	28.2**
Marital status			
Married	70.8	72.8	0.2
Parental status			
Have children	93.7	90.2	2.3
Health limitations			
None	61.8	57.9	0.9
Slight	32.6	35.7	
Considerable	5.6	6.4	

[a]*Notes.* United States: graduated from a 4- or 5-year college/bachelor's degree or more. Netherlands: graduated from higher vocational college or more.
**p < .01.

identity accommodation. More youthful and positive conceptions of aging will mediate these relations between identity processes and self-esteem.

The second set of hypotheses relates to cultural similarities and differences in these relations. Despite possible cultural differences in identity processes and self-esteem, IPT points out basic psychological processes. We therefore hypothesize that the relationships between identity processes and self-esteem will be similar in both countries. As youthful and positive conceptions of the aging self will be more important in the United States than in the Netherlands, we hypothesize that they will have a stronger mediating effect on the relation between identity processes and self-esteem in American than in Dutch aging persons. In statistical terms, there will be a moderated mediation of youthful and positive aging self on the relation between identity processes and self-esteem within the two cultures.

Method

Participants

In both countries, psychology students collected the data. In the United States, students in a course on adult development and aging collected 319 completed questionnaires of adults between 40 and 85 years of age. In the Netherlands, the students participated in a research seminar in a Psychogerontology Bachelor program. Each student collected four or five questionnaires in preassigned sex and age groups (40–54, 55–69, and 70–85 years). Together, they collected 235 completed questionnaires. In both countries, participants were family members and acquaintances of the students.

Table 1 presents the main characteristics of both samples. Even though psychology students recruited the participants,

Table 2. Distribution of Psychological Variables and Bivariate Correlations in the United States ($N = 319$) and the Netherlands ($N = 235$)

	ID ass.	ID acc.	ID bal.	Age ID	Phys. decl.	Social loss	Cont. grw.	Self-esteem
Distribution								
Scale	1–7	1–7	1–7	−14 to +60	1–4	1–4	1–4	1–4
USA (M)	4.0	3.1	5.1	12.2	2.5	1.8	3.2	3.4
USA (SD)	0.8	1.2	0.9	11.6	0.6	0.6	0.5	0.5
NL (M)	3.7	3.2	5.1	8.8	2.7	1.8	3.0	3.3
NL (SD)	0.9	1.0	0.7	8.5	0.6	0.6	0.6	0.4
t_{552}	3.8***	−1.1	−0.4	3.8***	−3.6***	1.3	4.3***	4.2***
Cohen's d	.35	−.09	.00	.33	−.33	.00	.36	.22
Correlations[a]								
Assimilation	—	.24***	−.13*	.04	.14*	.18***	−.31**	−.04
Accommodation	−.04	—	−.04	−.07	.18**	.26***	−.23***	−.45***
Balance	.09	−.21***	—	.18**	−.15*	−.36***	.42***	.37***
Age identity	.01	−.11*	.14*	—	−.13*	−.19**	.19**	.22***
Physical decline	.00	.21***	−.19***	−.14*	—	.42***	−.30***	−.24***
Social loss	.04	.38***	−.28***	−.15**	.50***	—	−.53***	−.43***
Continued growth	.01	−.24***	.36***	.24***	−.35**'	−.43***	—	.38***
Self-esteem	.10	−.45***	.38***	.24***	−.31***	−.60***	.50***	—

Notes. [a]Correlations below the diagonal for the United States and above the diagonal for the Netherlands.

* $p < .05$; ** $p < .01$; *** $p < .001$.

both samples varied in terms of age, sex, education, and living circumstances. The American sample was somewhat younger and consisted of more females than the Dutch sample. This is the result of the quota sampling procedure used in the Netherlands, which resulted in approximately equal numbers in age and sex groups. The Americans were more likely to be employed, which can be expected given the frequency of early retirement (before 65 years) in the Netherlands. The samples were similar in educational level, marital status, parental status, and health limitations.

Instruments

Age identity was measured with one question: "Many people feel older or younger than they actually are. What age do you feel most of the time?" The difference between one's chronological and subjective ages is used as a measure of youthful age identity (Westerhof & Barrett, 2005). When a respondent's subjective age is younger than chronological age, a positive value is obtained; when subjective age is older, age identity has a negative value.

The Personal Experience of Aging Scale (Steverink et al., 2001; Dutch version: Westerhof, 2003) was used to measure the experience of aging as physical decline, social loss, or continuous psychological growth with four items each. Sample items for the three subscales are "aging means to me . . . that I have less physical endurance; . . . that I am less respected by others; . . . that I am becoming more and more competent." The backwards translation in English was done with the Dutch version. Exploratory factor analyses revealed a three-dimensional structure in both samples, with the items loading high on the expected factor and low on the other two factors. The reliability of the subscales was adequate to good (aging as physical decline, .78 in the United States and .77 in the Netherlands; aging as social loss, .72

and .68; and aging as continued growth, .67 and .76, respectively). The three scales were significantly related to each other in both countries (see Table 2). A four-point rating scale was used, with higher scores implying that individuals agreed more with the items of the subscale.

The Identity and Experiences Scale (Whitbourne et al., 2002) was used to assess identity processes of assimilation, accommodation, and balance. The items were derived from an interview study (Whitbourne, 1986b). Based on factor and reliability analyses of previous longer versions, the present three-dimensional scale with 33 items was developed (Whitbourne et al., 2002). The validity was shown by the relations of the three subscales to self-esteem, self-consciousness, need for cognition, and defense mechanisms (Skultety & Whitbourne, 2004; Sneed & Whitbourne, 2003; Whitbourne et al., 2002). Sample items for each of the three subscales are "I like to see myself as stable, consistent, and unlikely to change" (identity assimilation); "I often change my mind as I consider different alternatives in life" (identity accommodation); and "I feel confident in who I am but am willing to learn more about myself" (identity balance). This scale was translated into Dutch and back into English to check if item formulations were equivalent in both languages. A 7-point rating scale was used, and a higher score indicates that individuals relied more on the strategy.

Exploratory factor analyses showed the three-dimensional structure in both samples, with the items generally loading high on the expected factor and low on the other two factors (cf. Whitbourne et al., 2002; see Supplementary Table 1). The reliability of the subscales with 11 items each (Cronbach alpha) was adequate to good (identity assimilation, .71 in the United States and .79 in the Netherlands; identity accommodation, .89 and .85; and identity balance, .84 and .78, respectively). Identity accommodation was related to

identity balance ($r = -.21$; $p < .01$) in the United States, whereas identity assimilation was related to identity accommodation ($r = .24$; $p < .01$) and to identity balance ($r = -.13$; $p < .05$) in the Netherlands (see Table 2). Despite the similarities in factor structure and reliability, these differences in correlations show that the scales might be interpreted somewhat differently in the two countries.

The Rosenberg Self-Esteem Scale consists of 10 items measuring self-esteem (e.g., "I feel that I have a number of good qualities"; Rosenberg, 1965; Dutch version: Zwanikken, 1997). Exploratory factor analyses showed that the scale was one dimensional in both samples. The scale was highly reliable in the United States (Cronbach alpha = .89) and the Netherlands (.81). A 4-point rating scale was used, with higher scores indicating more self-esteem.

Participants also completed a brief demographic questionnaire assessing age, gender, education, occupation, marital status, parental status, and health limitations.

Analyses

We first tested differences between the countries in mean scores of all relevant psychological variables with independent t tests. We also determined effect sizes by means of Cohen's d (small, $d = 0.20$; medium, $d = 0.50$; and large, $d = 0.80$; Cohen, 2005). Next, we inspected the bivariate relations between the variables of interest in each country. To assess the first set of hypotheses, we did a three-step hierarchical ordinary least squares regression analysis of self-esteem using the pooled data set. We included background variables in the first step, identity processes in the second step, and aspects of the aging self in the third step. In this way, we can first conclude whether identity processes are related to self-esteem above and beyond the background variables in each country. Next, we can conclude whether age identity and personal experiences of aging are related to self-esteem in each country. Last, we determined whether the aging self has a mediating effect when the regression coefficients of self-esteem on identity processes decline after entering the aging self. We used a multiple mediator model in order to test the indirect effects of age identity and aging experiences using bootstrapping procedures ($N = 5,000$ bootstrapping resamples; Preacher & Hayes, 2008). As prescribed, mediation exists when the 95% confidence interval of the estimated indirect effect does not include zero.

To assess the second set of hypotheses, we ran the final regression model on self-esteem in each country separately with all background and psychological variables as independent variables. Next, we did a general linear model (GLM) analysis to compare the differences in the regression coefficients between the countries. We therefore specified an interaction of each independent variable with country. In a last analysis, we tested the moderated mediation following the procedures outlined by Preacher, Rucker, and Hayes (2007).

RESULTS

We first analyzed the frequency distributions and bivariate relations among the psychological variables of interest. The corresponding figures are presented in Table 2. American participants use identity assimilation significantly more often than Dutch participants, but they are similar with regard to identity accommodation and balance. Americans have younger age identities than the Dutch: The discrepancy between felt and chronological age is almost 3.5 years larger in the United States. The Americans experience aging less as a process of physical decline and more as a process of continued growth than the Dutch, but they do not differ from each other with regard to the experience of aging as social loss. Last, the Americans report significantly higher levels of self-esteem than the Dutch. Effect sizes (Cohen's d) are small for self-esteem and between small and medium for identity assimilation, age identity, and the experience of physical decline and continued growth.

Next, we analyzed the bivariate correlations between the psychological variables. The correlations for the American participants are above and for their Dutch counterparts below the diagonal in Table 2. The first set of hypotheses specified relations between identity processes, the aging self, and self-esteem. In both countries, lower identity accommodation and higher identity balance are related to higher levels of self-esteem. Lower identity accommodation and higher balance are also related to more youthful age identities and more positive aging experiences in both countries. Last, younger age identities and more positive experiences of aging are related to higher levels of self-esteem in both countries. Except for the lack of relationships between identity assimilation and the other constructs, these relations provide preliminary evidence for the first set of hypotheses.

The second set of hypotheses specified similarities and differences in these relations between the United States and the Netherlands. As expected, identity processes are similarly related to self-esteem in both countries. Furthermore, the relation of the aging self with self-esteem appears to be stronger in the United States than in the Netherlands. However, there appears to be no difference in the relation of youthful age identities with self-esteem between both countries.

In order to control for the background variables as well as for the interrelations among the psychological variables, we carried out a hierarchical regression analysis in the pooled sample with self-esteem as the dependent variable (see Table 3). In the first step, we entered the background variables (country, age, sex, education, employment status, marital status, parental status, and health limitations). It can be seen that the background variables did not explain much of the variance in self-esteem. The Dutch have somewhat lower self-esteem than the Americans. Those who are employed and have fewer health limitations have higher self-esteem.

We introduced identity processes in the second step of the analysis. They explained about 27% of the variance in

Table 3. Ordinary Least Squares Regression of Self-Esteem in the Pooled Sample (*N* = 554)

	β	β	β
Dutch	−.153***	−.134***	−.122***
Chronological age	.098	.070	.075
Sex: female	−.014	.020	.002
Higher education	.065	.044	.028
Employed	.123*	.061	.026
Married	.025	.016	−.022
Have children	.019	.007	.014
Health limitations	−.159***	−.127***	−.060
Assimilation		.091*	.115***
Accommodation		−.400***	−.281***
Balance		.288***	.154***
Age identity			.079*
Physical decline			.024
Social loss			−.309***
Continued growth			.179***
Adjusted R^2	.064[a]	.338[a]	.467[a]

Notes. [a]Significant change in R^2.

p < .05; ***p* < .001.

self-esteem after controlling for the background variables. Higher identity assimilation and balance and lower identity accommodation were related to higher self-esteem. In the third step, we added the variables of the aging self. These added another 13% of explained variance. Feeling younger than one's chronological age and experiencing aging less as social loss and more as continued growth were related to self-esteem. The experience of aging as physical decline was not related to self-esteem.

The coefficients of identity accommodation and identity balance decline after introducing the personal experience of aging variables. These findings suggest that there is indeed a mediating effect of the aging self on the relation between identity processes and self-esteem. In order to analyze these possible mediating effects, we carried out a test of indirect effects using the multiple mediator model. In each model,

we specified the targeted identity process as the independent variable, youthful age identity and the three dimensions of the aging experience as the mediating variables, self-esteem as the dependent variable, and the background variables as well as the two other identity processes as covariates. There was no significant mediating effect for identity assimilation (top panel of Table 4). The relation of identity accommodation with self-esteem is mediated by a youthful age identity, the experience of aging as social loss and continued growth (middle panel of Table 4). The relation of identity balance with self-esteem is similarly mediated by a youthful age identity, the experience of aging as social loss and continued growth (bottom panel of Table 4).

We conclude that the first set of hypotheses is partially confirmed: Identity processes, youthful age identities, and the personal experience of aging are related to self-esteem. Youthful age identities and the experience of aging as social loss and continued growth mediate the relationship of identity accommodation and balance with self-esteem. The expectations were not confirmed with regard to identity assimilation and the experience of aging as physical decline.

Our second set of hypotheses addressed the cultural differences in the relations between identity processes, conceptions of the aging self, and self-esteem. To test these possible cultural differences, we ran the final regression models for each country separately and tested in a GLM model the interactions between country and the other independent variables (Table 5). As expected, identity processes are not differently related to self-esteem in both countries. The experience of aging as social loss and continued growth is significantly more strongly related to self-esteem in the United States than in the Netherlands. In contrast to our expectation, youthful age identities and the experience of aging as physical decline are not differently related to self-esteem in both countries.

Table 4. Bootstrap Results for Indirect Effects of Identity Processes on Self-Esteem Through Age Identity and Experience of Aging

				Confidence interval	
	Data value	Bootstrap value	*SE*	Lower value	Upper value
Identity assimilation					
Age identity	.000	−.001	.002	−0.006	0.004
Physical decline	.000	.000	.001	−0.003	0.002
Social loss	−.005	−.006	.007	−0.020	0.008
Continued growth	−.005	−.005	.004	−0.016	0.002
Identity accommodation					
Age identity	−.003	−.003	.002	−0.008	−0.001
Physical decline	.002	.002	.003	−0.004	0.008
Social loss	−.037	−.037	.008	−0.055	−0.024
Continued growth	−.013	−.013	.005	−0.026	−0.006
Identity balance					
Age identity	.006	.006	.004	0.001	0.016
Physical decline	−.001	−.001	.002	−0.007	0.002
Social loss	.042	.042	.011	0.024	0.066
Continued growth	.030	.030	.009	0.015	0.049

Note. Controlling for country, age, sex, education, employment status, marital status, parental status, and health limitations.

Table 5. Ordinary Least Squares Regression of Self-Esteem in the United States ($N = 319$) and the Netherlands ($N = 235$)

	USA	NL	
	β	β	$F(1, 524)$
Chronological age	.062	.028	0.258
Sex: female	.055	−.071	3.290
Higher education	.016	.001	0.058
Employed	−.026	.076	1.015
Married	−.010	−.052	0.224
Have children	−.006	.059	0.600
Health limitations	−.097*	.006	2.141
Assimilation	.084	.146*	0.064
Accommodation	−.231***	−.383***	2.294
Balance	.132***	.231***	1.168
Age identity	.071	.080	0.030
Physical decline	.061	−.036	1.517
Social loss	−.387***	−.195**	9.618**
Continued growth	.231***	.104	4.410*
Adjusted R^2	.504[a]	.381[a]	

Notes. [a]Significant change in R^2.
*$p < .05$; ** $p < .01$; *** $p < .001$.

Last, we used a moderated mediation model. We ran this model six times for each of the two identity processes (identity accommodation and balance) and each of the dimensions of the aging self (youthful age identity, aging as social loss and continued growth), which showed mediation in the pooled sample. In each model, country was the moderating variable, the targeted identity process was the independent variable, and self-esteem the dependent variable. In each model, we specified one dimension of the aging self as a mediator, whereas we treated all other psychological variables and the background variables as covariates.

There was no significant interaction for youthful age identity. There is thus no moderating effect of country on the mediating role of this variable. We found significant interaction effects for the experience of aging as social loss on identity accommodation and balance (accommodation: $B = .207$, $SE = .051$, $t = 4.014$; $p < .001$ and balance: $B = .193$; $SE = .052$; $t = 3.72$; $p < .001$) as well as for the experience of aging as continued growth on identity accommodation and balance (accommodation: $B = −.187$, $SE = .057$, $t = −3.292$; $p < .01$ and balance: $B = −.189$; $SE = .060$; $t = −3.146$; $p < .01$). Country is thus a moderator of the mediating effect of the experience of aging as social loss and of continuous growth: The effect is stronger for the American than the Dutch participants. As expected, two aspects of the aging experience play a stronger mediating role in the United States than in the Netherlands.

DISCUSSION

In this study, we used social cognitive, developmental, and sociological theories of self and identity across the life span to develop hypotheses about the role of the aging self in the United States and the Netherlands. These countries have retirement and welfare systems that differ in their valuation of old age and in their emphasis on individual responsibility in the aging process.

We found a number of differences in the variables of interest. Americans used more assimilative identity strategies; they had more youthful age identities, a more positive experience of aging in the physical and psychological domains, and higher self-esteem. These findings match previous findings from American-European comparative studies, which have pointed out that Americans are stronger self-enhancers than Europeans (Uotinen, 1998 and Westerhof et al., 2003 on age identities; Schmitt & Allik, 2005 on self-esteem). Taken together, these findings may indicate that American aging individuals more often avoid integrating aging experiences into their existing sense of identity with the aim of self-enhancement. Although these differences are significant, they are between small and medium in size. This suggests that American and Dutch persons do not belong to two radically different cultures. Rather, they differ only in their degree of using self-enhancing strategies in dealing with old age.

As expected, identity processes were related to self-esteem in a similar way in both countries. Identity assimilation had the weakest relation with self-esteem, a finding consistent with previous American studies (Sneed & Whitbourne, 2003; Whitbourne et al., 2002). These findings confirm our hypothesis that despite cultural differences in mean levels of identity processes and self-esteem, they are similarly related to each other in both countries. This is even more remarkable, given the finding that the identity processes showed somewhat different relations among each other in both countries.

Moreover, we found that three aspects of the aging self were related to self-esteem. A youthful age identity was only weakly related to self-esteem, but again, this is consistent with previous findings (Barak & Stern, 1986; Gana et al., 2004). In the multivariate analyses, the experience of aging as physical decline was no longer related to self-esteem. The social and psychological aspects of the aging experience appear to be more important in terms of self-enhancement. This finding is of interest to our study as these aspects might also be most clearly related to differences in welfare states in developed countries. Whereas previous studies have shown cultural differences in health-related selves in later life between cultures as disparate as the United States, Congo, and India (Westerhof, Katzko, Dittmann-Kohli, & Hayslip, 2001), the role of health in the aging self appears to be more similar in the United States and the Netherlands. As expected, two aspects of the aging self were more strongly related to self-esteem in the United States than in the Netherlands. Maintaining a positive outlook on the aging self thus has a stronger self-enhancing function in the United States than in the Netherlands.

The hypothesis concerning the mediating effects of the aging experience on the relation between identity processes and self-esteem was confirmed for those variables that

showed a strong enough relation with self-esteem. As expected, the mediating effect of aging as social loss and continued growth was stronger in the United States than in the Netherlands. These findings support our expectation that Americans and Dutch approach aging differently in accordance with differences in welfare systems.

The study has a number of limitations. First, it has a cross-sectional design and does not permit causal interpretations. We tried to build our models on theoretical grounds but cannot be sure whether self-esteem also influences identity processes or the aging self. Second, students from two universities recruited ad hoc samples of middle-aged and older adults in slightly different ways. Although we reached a diverse group of participants, these samples may not resemble the typical population of adults in their second half of life in both countries. It would be interesting to test the hypotheses in more representative surveys as well as in other samples, especially more poorly educated and more ethnically diverse samples. We expect that the cultural differences will be even larger in such samples, given the differences in societal support generated by the different welfare systems for these more vulnerable groups.

Last, some limitations exist in the measurement of the variables. We had no data at the individual level concerning perceptions of the welfare systems, we used a one-item measure of age identity, and we only studied self-esteem as an outcome. In further research, the effect of individual perceptions of welfare regimes on the aging process should also be studied. Multidimensional assessments of age identity are also recommended, and it would certainly be interesting to study the effects of identity processes and personal experiences of aging with regard to other outcomes, such as cognitive and physical functioning.

Despite these limitations, our study provides evidence for the importance of including broader sociocultural systems in theoretical models about psychological aging. More to the point, the study shows that the self-enhancing function of positive perceptions of the aging self is stronger in the United States than in the Netherlands.

SUPPLEMENTARY MATERIAL

Supplementary material can be found at: http://psychsocgerontology. oxfordjournals.org/.

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