Educational Gerontology, 34: 105–123, 2008

Copyright © Taylor & Francis Group, LLC ISSN: 0360-1277 print/1521-0472 online DOI: 10.1080/03601270701700359



YOUNG PEOPLE'S IMAGES OF OLD AGE IN CHILE: EXPLORATORY RESEARCH

Marcelo Arnold-Cathalifaud

Social Observatory of Old Age and Ageing in Chile, University of Chile, Santiago, Chile

Daniela Thumala

SOLES Foundation, Santiago, Chile

Anahi Urquiza Alejandra Ojeda

Anthropology Department, University of Chile, Santiago, Chile

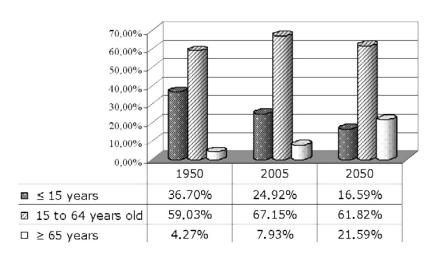
According to gerontological thought, an important part of senior citizens' disabilities are products of their social exclusion rather than factors associated with their physical or mental health. How these exclusions come about was the purpose of the research reported in this article. The study was conducted among 682 Chilean university students using a semantic differential test. A generalized negative image on old age was observed. The conclusion is that social images of old age affect the well-being of present and future senior citizens.

Research study developed in the Project Rings of Social Sciences framework, funded by CONICYT (National Commission of Scientific and Technological Research) and the Inter American Development Bank. Florencia Jensen and Natalia Vogel, Anthropology and Development Master Program students from the University of Chile, contributed to this article and Tamara Arnold did the statistical data analysis.

Address correspondence to Marcelo Arnold Cathalifaud, Social Observatory of Old Age and Ageing in Chile, University of Chile, Social Faculty Science, Av I. C. Pinto 1045, Santiago, 6850331. E-mail: marnold@uchile.cl

Chile has a population of 16.3 million and is undergoing an important demographic change. It is aging quickly and in this matter stands out in Latin America. Fertility rates have decreased and are reaching a level below replacement rates (Bravo & Bertranou, 2006). There are lower rates of mortality and, at the moment, according to the National Bureau of Statistics, life expectancy is 78 years of age—an increase of more than 20 years in the last five decades. In 2005 senior citizens were 7.93% of the population. In 2050 they are expected to be 21.59% (Aguilera, 2005). At the moment there are 1,717,478 senior citizens in Chile. If we take into account the projections mentioned, the senior population will, in a brief time, occupy a vast part of the structure of our society, even larger than the under 15 age group (see Figure 1).

The increase in the proportion of the senior population raises concerns regarding the complexity of the phenomenon. One concern has to do with the images and expectations of old age and their consequences. These images are related to the way in which this group is integrated and valued with how senior citizens perceive and experience this life stage—especially in how younger generations envisage their own old age.



Source: Aguilera. M (2005). The New Projections of Population. Chilean National Bureau of Statistics

Figure 1. Chile: Evolution of population structure by large age groups, 1950–2050 (percentages).

Although social representations of old age do not have a universal character, they contain stereotypes with strong negative connotations. Such representations depart from what senior citizens can expect, due to advances in the medical sciences that have increased present life expectancies. In a research study in Spain (Adelantado, Segura, De Andres, Feliu, & Martinez, 2004) it was observed that common images of old age are far from representing what senior citizens themselves think and feel or how they perceive going through this life stage.

Other examples, indicated by Tan, Zhang, and Fan (2004), show how in the United States, Southeast Asia, and the Caribbean, aging is associated with negative characteristics, such as "sad," "inflexible," "unappealing," to mention some. A study done in Nigeria—a country where life expectancy will reach 64 years in 2025—to explore the knowledge Nigerian young people have of old age, showed that even though Nigerian young people have little coexistence experience with older people, they have developed strong negative stereotypes towards them (Okove, 2004). Specialized literature lists few exceptions to these responses. Among the exceptions, a study on Chinese university students' perception of senior citizens stands out (Tan et al., 2004). It was observed that the students had positive or neutral attitudes towards senior citizens, and many of them had considered working with them in the future. The authors attribute young people having a positive attitude towards senior citizens to local culture since Confucianism values tradition.

In Chile in 2002, the National Committee for Senior Citizens did a study on secondary education students that aimed to determine young people's perception of old age. The sample included 164 students who were in their third year of high school and who belonged to five mixed schools of the Metropolitan Region; their ages ranged between 15 and 18 years old. Although at the time of the survey there were some positive tendencies observed towards senior citizens, it was apparent that there were negative stereotypes. Therefore, the committee concluded that it was urgent, from a public policies perspective, to reverse these negative images and attitudes towards senior citizens (National Committee for Senior Citizens Report, 2002).

Even though it is also possible to observe positive images towards senior citizens in some contexts, the tendency is to perceive old age as a stage in which positive characteristics of life are lost. Most of the available studies show that the images that young people build of old age are, in general, associated with a negative assessment of this life stage. Studies concur that old age stereotypes focus on the loss of senior citizens' abilities, emphasize that conventional positions

become radical as years pass, that sexual interest would decrease or disappear and that there would be increasing difficulties adapting to new social and technological contexts.

From these images it is feasible to suppose that for young people their relations with senior citizens may imply a task they have to undertake. On this matter, and according to the results of a recent national survey (PUC-ADIMARK, 2006), in Chile most people affirm that when parents age it is the children who should financially take care of them. In any case, it is interesting to observe that it is young people (68.4%) who agree with this idea of taking care of those who are aging more than senior citizens themselves (56%).

Summing up, the tendency is to suppose that "after the stages of growth, maturity and apogee, comes a phase of deterioration (Puijalon & Trincaz, 1999). In agreement with this, then, it is not out of the ordinary to suppose that, in counterpart, youth and early adulthood are seen as the only stages in which it is possible to achieve personal accomplishments and success, or when there are greater possibilities of finding happiness; these stages of life would be idealized.

Because social reality emerges from auto-referent processes, the images and representations that people have on different age groups affect the particular way they relate to them because they support the confirmation of these expectations. A sort of self-fulfilled prophecy reproduces discriminatory relationship styles. Specifically, the heteroperception on senior citizens leads to a self-perception that affects their own self-esteem (Gómez Carroza, 2003). This means that the cycle finally includes those involved: senior citizens end up living up to the negative images people have of their life stage.

The objective of the following study was to extend the knowledge about the images that young Chileans, in this case university students, have on old age. It was also an objective to invite people to reflect, using the results as a starting point, on some of their possible implications for Chilean society.

THEORETICAL FRAME

Our starting point was to investigate how senior citizens are perceived and to question ourselves on the images our youth has of old age: what they are and how they are constructed. Specifically, our objectives consisted of identifying the characteristics that young people confer to old age.

The study was based on a theoretical proposal closely linked to the systemic and constructivist descriptions that state that everything

that is produced and reproduced as knowledge—including images, stereotypes or expectations—is linked to observation functions that are determined by the possibilities and present conditions of society (Luhmann, 1998). From this perspective, known as sociopoietic (Arnold, 2003), it is possible to describe the different underlying principles of social reality and to recognize the strong differentiation of society, which encourages the understanding of complex phenomena that lack univocal references.

From an equivalent perspective, the Spanish sociologist Juan Luis Pintos (2004) defines our objects of observation as social imaginary. This means socially constructed schemes of distinction that allow perceiving, explaining, and taking part in social communication. Among the functions these schemes have are the production of stability in social relations and the generation of global explanations to fragmentary and dissimilar phenomena. According to this perspective, roles would come from the set of conducts, attitudes, and ideas that are expected from a certain kind of people.

The sociopoietic program is appropriate to study old age. This is because the attributions used to designate the existential and experiential contents of each stage of life come from schemes of distinction from which social expectations are formed, which increase the probabilities that communications and actions follow certain paths and not others. In this sense, it is interesting to observe how old age is observed in our society's communications, as they are connected with styles of behavior's expectations.

METHODOLOGY

A semantic differential test was applied in order to recognize the distinctions applied to old age (Osgood, Suci, & Tannenbaum, 1957). This kind of test is particularly useful for communication-based studies. The instrument comprised a series of pairs of adjectives generated from specialized literature, which permit assessing assumptions on old age. In order to select the adjectives that finally shaped the instrument, a trial test was previously applied to a sample of 60 university students and later assessed by experts. The following pairs of adjectives were selected from this process: independent/dependent; productive/unproductive; efficient/inefficient; skilled/clumsy; healthy/sickly; sexually active/sexually inactive; fragile/strong; outgoing/introvert; tolerant/intolerant; trusting/suspicious; conservative/activist; concurring/conflictive; passive citizen/active citizen; protected/abandoned, integrated/marginalized, and socially valued/

not socially valued. These adjectives were used as ranges confronted to Senior Citizen, Elderly Man, and Elderly Woman categories. In this kind of testing, these categories of people act as reactives. Students were asked to estimate an age for each of the three reactives. Their estimated averages for elderly men and women were 70 years old. For senior citizens, the estimated average was 61 years, an age at which many people are not yet retired and are in the middle of the productive stage. The pairs of adjectives and the location of the "positive" and "negative" aspects of each pair were randomly displayed. A distance of seven points between the extremes was assigned so that those surveyed could mark where they placed each of the reactives for each of the 16 pairs of adjectives (see Table 1).

The sample design was nonprobabilistic, and it was specifically based on the convenience sampling model technique that operates from the nonrandom selection of units under the contact criteria in groups that are part of the targeted universe and whose availability is most advisable (Zikmund, 1998). The theoretical universe of the study corresponded to undergraduate university students who belonged to Metropolitan Region institutions that are part of the Chilean Universities Rector's Council. However, when a captive sample of general elective course students was used, the real universe was limited to this group. If we take into account that there are a total of

Table 1. Test format

(se	nior citizen, elderly man and wo	man)
Independent		Dependent
Productive		Unproductive
Healthy		Sickly
Intolerant		Tolerant
Efficient		Inefficient
Fragile		Strong
Activist		Conservative
Passive citizen		Active citizen
Abandoned		Protected
Sexually active		Sexually inactive
Skilled		Clumsy
Integrated		Marginalized
Trusting		Suspicious
Conflictive		Concurring
Outgoing		Introvert
Socially valued		Not socially valued
•	(7 points distance)	

Dogetive

87,923 students enrolled in the real universe, the University of Chile has 24% of the total (24,502 undergraduate students). The sample had 682 students. Even though the sample was based on a nonprobabilistic design, the simulation of error estimation indicates that, had it been a random sample, its margin of error would have been $\pm 3.7\%$ using a maximum variance algorithm. In order to recollect the data, those surveyed were given a questionnaire with instructions they could follow.

The sample was 50.3% men and 49.7% women, a proportion similar to the national parameter and to the enrolled undergraduate university students of the universities of the country. The average age of the students was 20.16 years. The youngest people surveyed were 17 years old and the oldest, 25 years old (6 and 12 students respectively). Therefore, 76.4% of the sample was between 18 and 21 years old. Following are the areas of study of the students according to their enrolment and in agreement with the standardized international education classification (UNESCO, 1997): 36% belonged to social sciences, law, humanities and communications; 12% to commercial education; 12% agriculture; 11% physical sciences; 10% architecture and production; 9% medicine; 5% engineering and similar professions; and 5% arts. Additionally, 80% of the students indicated they attended high school in the city of Santiago while 20% attended high school in different regions of the country. Finally, with respect to the economic situation of those surveyed, it was possible to distinguish two general groups: those who can pay in full for their studies and those who require special state credits for the payment of their studies. In our sample, 46% belonged to the first group and 54% to the second.

In respect to the results assessment, a numerical value was assigned to each space or step between the ends of the pair of adjectives to allow statistical analysis. In order to make the assessment, the values of the steps between pairs of adjectives were systematized so that the highest value was always associated to the adjective of positive connotation and the lowest value to the adjective of negative connotation. In order to observe tendencies among the students and to assess the three reactives, it was determined that scores of 5, 6, and 7 would be a sign of a tendency towards the positive end of the pair, a score of 4 would indicate a neutral position, and scores of 1, 2, and 3 would indicate a tendency towards the negative end of the adjective pair. For example, with the pair independent/dependent, scores of 5, 6, and 7 would indicate a tendency towards the independent end; a score of 4, a neutral position; and scores of 1, 2, and 3 a tendency towards the dependent end. To refine and enrich the analysis, it

was determined that scores of 1, 2, and 6, 7 would indicate extreme tendencies for the trait (negative/right side and positive/left side). Finally, answer frequencies, percentages, values of dominant tendencies, and comparisons between percentages with a proportion difference test were calculated (alpha: 0.05).

RESULTS

The results of the semantic differential test showed uniform tendencies in the images that young people have of old age. In effect, it seems that the variables considered in the study—gender, origin, and socioeconomic level—do not significantly influence the images that young people construct around this life stage.

In the first place, it is interesting to notice that more than 68% of those surveyed think of senior citizens and elderly men and women as conservative. In the case of elderly women, 68.33% answered with a tendency towards negative values, while 77% of the sample think of elderly men as conservative, and 76% tend to consider that the senior citizens are conservative people. According to the proportion difference test applied, young people tend to perceive senior citizens and elderly men as more "conservative" than elderly women (see Figure 2).

It is important to emphasize that, in a proportion equal or greater than 50%, those surveyed assigned for this attribute scores between 1 and 2 of the semantic differential. These are extreme scores that reflect the force and weight that this image has in young people.

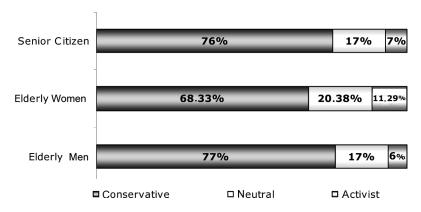


Figure 2. Conservative/Activist.

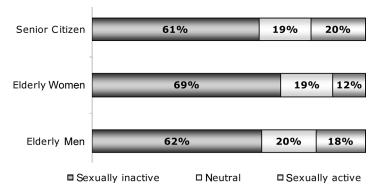


Figure 3. Sexually inactive/Sexually active.

In respect to sexuality, even though senior citizens, elderly men and elderly women are believed to have a noticeable tendency towards sexual inactivity, elderly women strongly embody this image, which represents quite a difference from senior citizens and elderly men. Of those surveyed, 69% tended to consider elderly woman "sexually inactive," whereas 62% consider elderly men and 61% consider senior citizens as "inactive" (see Figure 3).

It is interesting to consider that when assessing the extreme scores of the "sexually active" end (scores of 6 and 7) it is noticeable that senior citizens are significantly different from elderly men and elderly women. The former are considered to be more sexually active (9% versus 5% and 6%, respectively).

There is a consensus between young people describing senior citizens, elderly men, and elderly women as "sickly," "fragile," "marginalized," "not socially valued," and "dependent." These images can be related to the idea of loss of physical vitality ("fragile," "dependent," "sickly") and to the impression of a progressive relegation from society ("marginalized," "not socially valued").

In respect to the "healthy/sickly" adjective pair, although in

In respect to the "healthy/sickly" adjective pair, although in general senior citizens, elderly men, and elderly women are perceived as sickly people, elderly men are the worse assessed: 70% consider them "sickly," while elderly women and senior citizens receive 64% and 62%, respectively (see Figure 4).

In respect to the "fragile/strong" pair, 66% of those surveyed place senior citizens near the "fragile" end, 65.25% do the same for elderly men, and 77.71% think this of elderly women, who are seen as more fragile than the other two (see Figure 5).

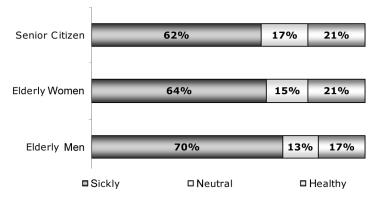


Figure 4. Sickly/Healthy.

On "social integration," 52% consider senior citizens as "marginalized," 50% also think this of elderly women, and 54% think that of elderly men—differentiating the last one from the other two groups as being more socially marginalized (see Figure 6).

In relation to the image of being socially valued, 59% considered senior citizens as people "not socially valued." For elderly women, 53.23% thought this, and for elderly men, 55% (see Figure 7).

A noticeable tendency can be seen in young people. Between 64% and 67% considered the three groups as "dependent." It is interesting to notice, when reviewing the positive extreme scores (6 and 7), that elderly men are considered "independent" by a significantly smaller percentage of young people, only 10%, in comparison to elderly

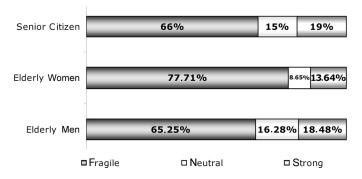


Figure 5. Fragile/Strong.

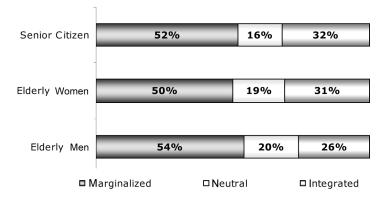


Figure 6. Marginalized/Integrated.

women and senior citizens, 15% and 19% for this characteristic in their extreme scores, respectively (see Figure 8).

In respect to the pair "active citizen/inactive citizen," between 49% and 53% were observed to consider the three categories as "passive citizens." However, the positive extreme scores (6 and 7) significantly differentiate senior citizens (19%) from elderly men and elderly women (14% and 12%, respectively) (see Figure 9).

On the pair "protected/abandoned," the tendency was to consider elderly men and elderly women as "abandoned," with percentages between 48% and 50% for the negative values of the attribute. Only senior citizens were considered as "protected" people (43%) (see Figure 10).

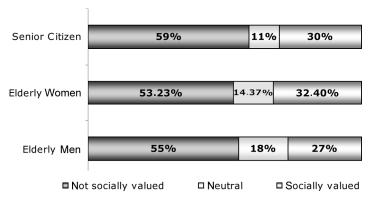


Figure 7. Not socially valued/Socially valued.

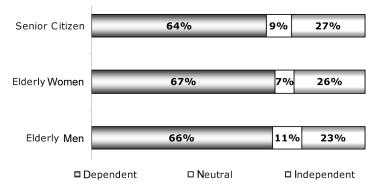


Figure 8. Dependent/Independent.

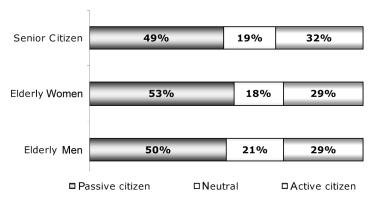


Figure 9. Passive citizen/Active citizen.

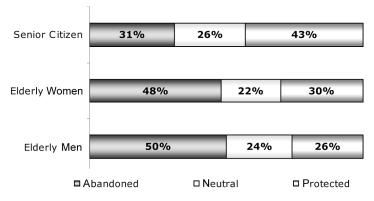


Figure 10. Abandoned/Protected.

Even though, in general, senior citizens, elderly men, and elderly women are negatively assessed, there were interesting differences for the "unproductive/productive" adjective pair. A tendency was observed to consider senior citizens as "productive" people (43%), which is quite different from elderly men, who presented a tendency towards the "unproductive" (48%). It was also different from elderly women, who were not evaluated with a clear tendency towards any end of the attribute.

These differences could be related as much to gender variables as with the ages attributed by those surveyed to senior citizens, elderly men, and elderly women. In our country, many of the present elderly women did not work on a remunerated activity during their youth and adulthood. Remunerated work is generally associated with "productivity," thus, the failure to work in such jobs can explain the lack of a clear tendency for elderly women in this trait (see Figure 11).

On the "efficient/inefficient" adjective pair, there was a clear and affirmative tendency to consider senior citizens on the "efficient" end of the range (41.6%), while the "inefficient" end obtained 25.7%. There were no significant score differences within the elderly men and elderly women groups; therefore, it is not possible to talk about tendencies for them (see Figure 12).

It is interesting to emphasize that, in general, elderly men are the worse evaluated group in the survey. Besides attributing to them the same negative characteristics that the other two groups are thought to have, elderly men are also seen as more "intolerant," "suspicious," and "conflictive," than elderly women and senior citizens.

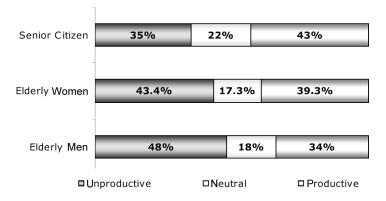


Figure 11. Unproductive/Productive.

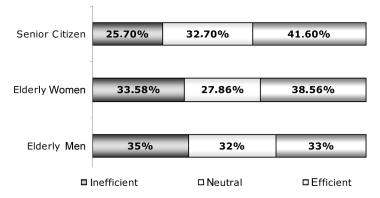


Figure 12. Inefficient/Efficient.

Elderly men are, therefore, differentiated from the other two groups in a significant way, as can be observed in Figure 13.

We must also emphasize that in the "conflictive/not conflictive" adjective pair, young people only showed a clear negative inclination toward elderly men. This group was considered most "conflictive" (48.53%) (see Figure 14).

Even though the tendency is to assign negative attributes to old age in most of the adjective pairs, both senior citizens and elderly women obtained scores that placed them near the "skilled" end (42% and 43%, respectively) for the "skilled/clumsy" pair. In the case of elderly men, there were no clear tendencies towards any end of the spectrum according to the proportion difference test (see Figure 15).

All three groups were positively assessed only in the "outgoing/introvert" adjective pair. Fifty-six percent placed senior citizens near the "outgoing" end of the spectrum. The same happened with elderly women; 61.58% placed them near this end. On the other hand, elderly men were also assessed positively, but only with 44.28% of the answers (see Figure 16).

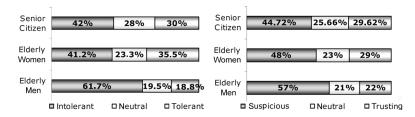


Figure 13. Intolerant/Tolerant and Suspicious/Trusting.

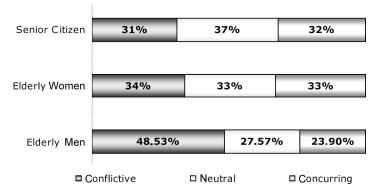


Figure 14. Conflictive/Concurring.

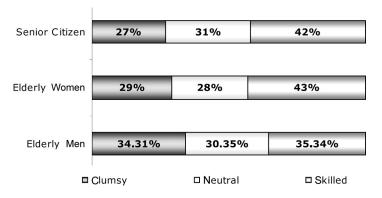


Figure 15. Clumsy/Skilled.

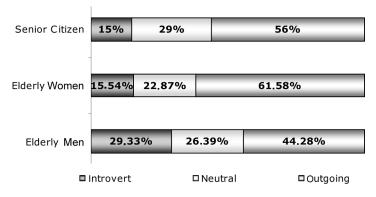


Figure 16. Introvert/Outgoing.

To summarize, even thought we observed some tendencies to positively assess senior citizens, elderly men, and elderly women, the images that young people construct around old age tend to be, for most of the adjective pairs, negative. Although, there are some differences in the negativity "level or degree" of some adjectives for the three groups. This confirms that, in spite of the differences found, negative stereotypes on old age are strongly marked by negative tendencies in the beliefs of the young people surveyed.

Finally, the three groups presented some significant differences in positive tendencies; elderly women are the best evaluated, followed by senior citizens and then elderly men.

DISCUSSION

The phases in which most peoples' life cycles are divided do not have a universal classification, least of all the specific contents that are attributed to each one of these stages. In this sense, and in agreement with Feixa (1996), a central aspect of the anthropological approach to age categories is considering them a cultural construction. As Moen and Spencer state, "That the life course is socially constructed means that it is reconstructed from time to time, especially in light of dramatic shifts in the larger social fabric of society" (Moen & Spencer 2006, p. 128). According to this perspective, one of the central aspects of old age from a social perspective (i.e., the contrast between the prestigious status given to the elderly in many primitive societies and the roles devoid of relevant status that they receive in modern western society) consists of capturing their social representations and the distinction schemes that constitute them.

Our results are consistent with those obtained in several of the studies reviewed, particularly those pertaining to western culture. We have been able to confirm that the characteristics that Chilean young people attribute to old age are related to deterioration ideas. This decline can be interpreted as another unexpected consequence of our modernization processes that, finally, is translated in the social exclusion of this age group. This is a process that starts with a void of positive roles, commonly known as "social death" and feelings of loneliness, a term used many times by older adults in order to describe what could be defined as depressive symptoms (Barg et al., 2006).

It is possible to conclude that most of those surveyed perceive old age as a tragedy. This is possibly related to the value we now give to youth. In today's society, personal accomplishments are associated with success and success is, in turn, linked to social status and money. It is not surprising then that competitive capacities, which are attributed mainly to young people and young adults, are seen as key elements to reach happiness.

Without intending it, young people generalize stereotypes that do not agree with senior citizens' present potential and that, on the contrary, encourage resignation and fatalism. Apparently, old age would cause anguish or shame. This contributes to the configuration of a social atmosphere that is quite gerontophobic. Without a doubt, most of these impressions are taken from images that circulate in a society where successful adults appear to be those who seem not to age and who fight aging.

The stereotypes contained in these social images condition the elderly to accept a "reality" based on prejudices that they finally make their own and then suffer the consequences. In this context, it is not extraordinary that many of those who approach old age fight to cling to the qualities of an idealized youth, which can generate significant frustration feelings.

It is important to indicate that these ideas—expectations and representations—can even affect the health of present senior citizens. This can happen if senior citizens take in the images that are believed to be "normal conditions for their age," neglect their health treatments, and lose motivation to make the efforts required to maintain a healthy life, with good levels of physical and psychological well-being. Take, for example, the case of loneliness. Even though there are no impediments for senior citizens to maintain or resume their love life, the social context plays against them, making it difficult for them to enjoy these experiences.

Finally, it is important to emphasize that the fact that young people have negative and pessimistic images on old age is also an important problem for them. These images represent expectations they have on their own lives: young people will also age and will have to face that stage with same stereotypes, that today they reproduce. As it is stated by Holstein and Minkler (in Hendricks & Russell, 2006):

... the power of unexamined cultural images subtly invades consciousness even when prejudicial to the person internalizing them... older people try to become what culture signals as desirable without always recognizing where the pressures originate and even if those efforts are ultimately self-defeating (p. 310).

For this reason we believe that exposing the images of old age that predominate in our society can contribute to reflection and analysis, which is a step in the right direction: changing them and therefore mitigating their unexpected consequences.

REFERENCES

- Adelantado, F., Segura, C., De Andrés, J., Feliu, T., & Martínez, P. (2004). The 85 years old elders in Sabadell. Revista Multidisciplinar de Gerontología, 14(5), 271–278.
- Aguilera, M. (2005). *The new population prospects*. Santiago, Chile: Chilean National Bureau of Statistics. Retrieved January 10, 2006, from http://www.eclac.cl/celade/noticias/paginas/7/22677/Maguilera.pdf
- Arnold, M. (2003). Basis of sociopoietic constructivism. Cinta de Moebio, 18, 2–14.
 Barg, F., Huss-Ashmore, R., Wittink, M., Murray, G., Bogner, H., & Gallo, J. (2006). A mixed-methods approach to understanding loneliness and depression in older adults. Journal of Gerontology: Social Sciences, 61B(6), 329–339.
- Bravo, J. & Bertranou, F. (2006). Demographic evolution and pensions in Chile. OIT Notes, 4, 1-4.
- Feixa, C. (1996). Anthropology of ages. In J. Prat & A. Martínez (Eds.), Essays of cultural anthropology. A tribute to Claudio Esteva-Fabregat. Barcelona, Spain: Ariel.
- Gómez Carroza, T. (2003). Heterostereotypes and selfstereotypes associated to old age in Extremadura. Doctoral thesis, University of Extremadura, Faculty of Teaching Staff Formation, Department of Psychology and Sociology of Education, Cáceres, Spain.
- Hendricks, J. & Russell, H. (2006). Lifestyle and aging. In R. Binstock & L. George (Eds.), Handbook of aging and the social sciences (pp. 301-319). Amsterdam, The Netherlands: Academic Press.
- Luhmann, N. (1998). *The society of society*. Frankfurt, Germany: Taschenbuch Verlag.
- Moen, P. & Spencer, D. (2006). Converging divergences in age, gender, health, and well being: Strategic selection in the third age. In R. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (pp. 127–144). Amsterdam, The Netherlands: Academic Press.
- National Committee for Senior Citizens Report. (2002). *Image of aging survey*. Santiago, Chile. Retrieved December 11, 2006, from http://www.senama.cl/Archivos/716.pdf.
- Okoye, U. (2004). Knowledge of aging among secondary school students in south-eastern Nigeria. *Educational Gerontology*, 30, 481–489.
- Osgood, C., Suci, G., & Tannenbaun, P. (1957). The measurement of meaning. Urbana, IL: University of Illinois Press.
- Pintos, J. (2004). Communication, construction of reality and social imaginaries. Santiago de Compostela, Chile: Universidad de Santiago de Compostela.
- PUC-ADIMARK. (2006). *Bicentury national survey*. Retrieved February 11, 2006, from http://www.emol.com/noticias/documentos/pdfs/encuestabicentenario 211006.jpg2.pdf
- Puijalon, B. & Trincaz, J. (1999). The mirror of society. Paris, France: The Mail of UNESCO. Retrieved December 12, 2006, from http://www.unesco.org/courier/ 1999_01/sp/dossier/txt31.htm

- Tan, P., Zhang, N., & Fan, L. (2004). Students' attitudes toward the elderly in the People's Republic of China. *Educational Gerontology*, 30, 305–314.
- United Nations Organization for Education, Science, and Culture [UNESCO]. (1997). *International normalized classification of education*. Retrieved March 23, 2006, from http://www.unesco.org.uy/educacion/CINE1997.doc
- Zikmund, W. (1999). Exploring market research. Mason, OH: Southwestern Educational Publishing.

Copyright of Educational Gerontology is the property of Routledge and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.