

## **Families, Generations and Intergeracionality In Net Modernity**

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## **Abstract**

*We are experiencing a period of accelerated socio-cultural, political and economic changes that are reflected in practically all social institutions, including the family. This is a secular social institution, which reflects the evolution of society. There is still resistance to “idealizing” the family as the “sphere of care*

*and love". However, it is known that the traditional family of the 19th century gave way to the nuclear family and that, at the same time, it gives way to families with different backgrounds. Also noteworthy are the transformations that occur in complex and liquid society, as highlighted by authors such as Morin and Bauman. In this sense, these transformations also occur in the social institutions that compose it, among them the family nuclei and other social spaces where different generations are inserted, especially with the increasing presence of elderly people. Therefore, with so many important social issues involved in these relationships (society-family-aging and intergenerationality), these reflections are considered to be extremely relevant.*

**Keywords:** society; family; aging; intergenerationality;

## **1. Introduction**

We are experiencing a period of accelerated socio-cultural, political and economic changes that are reflected in practically all social institutions, including the family. This is a secular social institution, which reflects the evolution of society. There is still resistance to "idealizing" the family as the "sphere of care and love". However, it is known that the traditional family of the 19th century gave way to the nuclear family and that, at the same time, it gives way to families with different backgrounds.

The liquidity of life, as referred by Bauman (2001), also has an effect on the rigid functionalist family structure, which today is undone by separations, (re) marriages, marriages between partners of the same sex, among many other possibilities. In addition, all families, practically have the presence of elderly or very elderly components, due to the extension of the population's years of life.

These are, therefore, possibilities of coexistence between different generations and, which cause conflicts in certain situations, because it is in the family where there are the greatest indicators of violence against the elderly, in all its nuances, be it mistreatment, exploitation, neglect and even physical violence. Although, socially and legally, there is a predictability that the family will be the "nest of love and care", usually sponsored by "caregiver" women, currently the cultural change in the social role of women in the last 50 years has brought consequences in these new family formations and it was, one of the causes of the deconstruction of this traditional model of functionalist family.

With the urban advance, the demographic changes caused especially by birth control, infant mortality and the control of contagious infectious diseases, and the democratic opening of the country, countless institutional spaces began to experience intergenerational exchanges never seen before. Also, the various changes brought about in family formation, especially due to the female role and sexual and gender diversity, brought important intergenerational exchanges.

Therefore, the objective of this work is to reflect on the theme of aging, supporting family arrangements and intergenerational generations.

## **2. Methodology**

This research is characterized as a reflection through bibliographic review, linked in the discipline of Citizenship and Social Insertion for Elderly Populations originated from the Post-Graduate Program in

Sociocultural Practices and Social Development of the University of Cruz Alta - UNICRUZ and the Interdisciplinary Group of Studies of Human Aging - GIEEH.

This article is structured based on the theoretical basis of Bauman and Morin, for the discussion on the liquid and complex society; authors like Ana Amélia Camarano; Alda Britto da Motta who discuss situations relevant to aging in families; Miriam Lins de Barros, Eduardo Bittar and Miriam Goldemberg, who bring the discussions about family and intergenerationality.

### **3. Results and Discussions**

#### **3.1. The accelerated process of population aging**

Population aging, since the last century, has resulted in accelerated demographic changes, caused by medical developments, improvements in health conditions and basic sanitation (CAMARANO, 2014). Among the main demographic changes, the decline in birth and mortality in all age groups is highlighted, as highlighted below in the projections of the Brazilian Institute of Geography and Statistics - IBGE:

[...] The population aged 60 or over goes from 14.2 million in 2000 to 19.6 million in 2010, and is expected to reach 41.5 million in 2030 and 73.5 million in 2060. Over the next 10 years, an average increase of more than 1.0 million elderly people annually (IBGE, 2015, p.146).

Based on Camarano and Mello (2010, p.14), the growing increase in the elderly population:

[...] it occurs in a context of marked structural changes in families, resulting from changes in nuptiality, the fall in fertility and the massive entry of women into the labor market. This entry affected traditional gender contracts, where the woman was the caregiver and the man, the provider. Today, Brazilian women are increasingly assuming the role of provider; their income was responsible for 40.9% of the income of Brazilian families in 2009, while still maintaining responsibility for the care of dependent members.

Family relationships have changed over the years, mainly with the decline in fertility and the insertion of women in the labor market, such changes have brought new forms of family arrangements along with the current demographic scenario. Currently, basically all families have elderly components (60 to 74 years old) and often elderly (75 to 90 years old) or even, these two stages of aging together, such as, for example, the interaction of young people / children with grandparents and great-grandparents in the same household. This “position of the elderly in the home can be considered an indicator of their empowerment or their fragility and dependence [...]” (CAMARANO; KANSO; FERNANDES, 2016, p.71).

An indicator of frailty, whether physical or mental, whether financial or social, is the proportion of elderly people in the condition of other relatives, that is, elderly people living with children, sons-in-law or daughters-in-law, nephews or other relatives. This proportion was higher among women, because as they live longer, they take care of their husbands, and when they die, they go to live with children or other relatives (CAMARANO; KANSO; FERNANDES, 2016, p.72).

Thus, one of the fundamental aspects about the diversity of this social group, that is, the elderly

population, was debated by the Human Rights Secretariat of the Presidency of the Republic, which highlights the increase in intergenerational families:

This phenomenon is due to the increase in life expectancy, but also to the new configurations of the contemporary productive world. Many unemployed, underemployed young people earn very little, marry at an older age and leave home at a late age. These changes now allow three or even four generations to live together in the same home [...] (BRASIL, 2013, p.20).

These changes in family groups are portrayed by Bauman (2008, p.35) "[...] This situation has changed and the crucial ingredient of the change is the new 'short-term' mentality that has replaced the 'long-term'. Marriages 'until death do us part' have become a rarity". Collaborating with Bauman (2008; 2001) in a society with liquidity in its human relations, Morin (2000) complements highlighting a complex society, thus modifying the paradigm of contemporary society.

Thus, "[...] due to this population aging, inclusive, social protection systems need to adapt to the new reality, providing support to families through social policies" (SILVA; DAL PRÁ, 2014, p. 100 ). Because, more and more, families are constituted according to the current population dynamics, especially when the elderly person has some dependencies related to locomotion, to manage their finances, self-care, among others, thus, the children end up paying a caregiver and / or bring this elderly to live in the same home, because supporting the parents / elderly is to follow the constitutional act, described in art. 229 "[...] older children have a duty to help and support their parents in old age, neediness or illness" (BRASIL, 1988, 01). However, public policies must establish more concrete and diversified social assistance for these families, considering this significant increase in the elderly population and intergenerationality.

### **3.2. Contemporary Families and Diversities in a Liquid Society**

It can be said that the family consists of a group of people who may or may not have a degree of kinship with each other and live in the same house forming a home. In this sense, the family is united by multiple bonds capable of maintaining the members morally, materially and reciprocally for a lifetime and for generations. "[...] In addition to the fact that it is a natural institution, the family is also a social construction, as its roles vary according to specific circumstances and pressures of society" (BITTAR, 2007, p. 596).

According to Kroth (2008) the course of family life has always been and is marked by political, social and economic circumstances that characterize historical moments:

- *Extended and Patriarchal Family*: in which a wide range of people were under the authority of the same chief, usually the patriarch (father).

- *Nuclear and conjugal family*: unit made up of the heterosexual couple (male / female) and their dependent children. This family is called a traditional family at the same time because it is formed by the father and mother, united by marriage or de facto union, and by one or more children.

Contemporary families are composed by the diversity in family arrangements, both of a family extended by consanguinity, that is, the presence of elderly (grandparents), uncles and others, as well as families without a blood bond starting from a sentimental bond, such as families homoparental.

Oliveira and Santana (2014, p. 3,162) corroborate these statements by stating that: "[...] single-parent families, which are constituted by the affective-sexual relationship between two individuals of the same

sex, who are in a stable relationship, in the same dwelling, with or without the existence of children in this relationship” and add:

Starting from the patriarchal family, in which the man, head of the family, was in charge of making decisions about the direction of each member of this constitution, going through the 'fragmentation' of family life, where grandparents, parents, grandchildren, uncles, cousins and etc. , started to occupy different dwellings, each with their respective 'nucleus' of coexistence, until reaching various forms of family organization in contemporary times: single-parent families, reconstituted families, extended families and single-parent families (OLIVEIRA; SANTANA, 2014, p. 3,162).

"[...] Homoparenting has gained prominence in debates and on major social media, due to its characteristic considered unusual when compared to other families: the presence of two spouses of the same sex taking care of a child." (OLIVEIRA; SANTANA, 2014, p. 3,161). In this work published by Oliveira and Santana (2014, p.3.161) there was a “possibility of (re) flexing and (re) organizing the speeches involving homosexuality and the Brazilian family [...]”, a theme so necessary in these times of rapid social changes.

Therefore, with the changes in the composition of families and the consequent reduction in the number of children or as Silva and Dal Prá (2014, p. 101) place “[...] in the future, individuals who do not have children or close relatives will be elderly without the protection provided by its members, that is, they will not have the support of people united by blood or affective ties”.

These are, therefore, the main findings of a society in which Modernity in Liquidity is experienced, as defined by Bauman (2001). “[...] what is important to say is that the mark of modernity is the growing process of privatization of the family's functions, insofar as it is experiencing the vacancy of the public from within, and leaving for the public life a number greater of activities ”(BITTAR, 2007, p.595), as is the case of these situations in which we have previously presented.

Another finding is that:

There is a decrease in social cooperativism and solidarism that, in the first instance, are felt within the family itself. After all, modern morality (solid or traditional) has been converted into postmodern morality (liquid or individualizing), the latter capable of stimulating, at most, provisional 'communities' (BITTAR, 2007, p. 598).

That same author also states that “Liquid love is an exemplary demonstration of the dissolutive capacity of capital, which disrupts basic institutions such as the family. The volatility of contemporary capital gives a liquefied look to love” (BITTAR, 2007, p. 600).

### **3.3. Contemporary Intergenerational Experiences**

The transformations of modern society, such as urbanization, the most demanding, competitive, low-wage labor market and computerization distance human and labor relations, as a consequence of this, the challenges that directly affect the structure and the family identity (BRITTAR, 2007).

Küchemann (2012) highlights these challenges in modern society, resulting from the rupture from the traditional family model to the contemporary model, in view of the diversity in the family composition,

such as: single-parent families, the insertion of women as protagonists in the labor market and no longer as home caregiver, among other challenges. Therefore:

[...] the family is in opposition to the public space, and shares space with the individual's personality and with the interested productivity of economic agents. For this reason, the family, in its surroundings, will have to represent something socially, so that, in the bourgeois era, an instrumental (sic) idea is projected in the marriage and in the feeling of the family nucleus, that both serve as support for relationships power, especially economic power (BRITTAR, 2007, p. 600).

Currently in Brazil, most households appoint the elderly as the head of the family, this fact is influenced by demographic, social and economic changes. Because “[...] although the majority of the resident children work, they have an average income lower than that of the elderly” (CAMARANO; EL GHAOURI, 2002, p. 19). The same authors also emphasize that “[...] the weight of the elderly's income in the budget of these households is significant, where the importance of the social benefit income is highlighted” (CAMARANO; EL GHAOURI, 2002, p.22).

There is still a smaller proportion of elderly people living with relatives / children, these elderly people being older, poor, with functional incapacity and worse health conditions, these are 'dependent' on the help of their children, this fact is explained, due to advancing age (longevity), predominance of chronic-degenerative diseases and reduced functional capacity. And, often, the younger elderly (60 to 65 years old) take care of the older elderly (over 75 years old) (CAMARANO; EL GHAOURI, 2002).

Generation, in a broad sense, represents the individual's position and performance in his age group and / or socialization over time. Hence the dynamic or unstable and plural sense that this condition, at the outset, represents. But what seems to many to be insecure of means or too short of achievements and, therefore, apparent existential, but also epistemological inexpressiveness - changing the age of each individual each year, as well as the gestation of a new generation with each new pulse of life social - in truth it means the structural becoming of a dimension of social life, which is, contradictorily, woven with affectivity and power relations (MOTTA, 2010, p. 226).

Human beings must prepare for old age, so that they can have a good social and affective life and continue to make their contribution to society. Happiness is achieved in the feeling of being, belonging, signifying, giving and fully enjoying the essence of life. It is necessary to combat the image of aging as a harbinger of death, but to face it as a natural process, a sequence of life (OLIVEIRA, 2002). For, old age does not mean only the predominance of “[...] diseases, prejudices and social instability, but also about happiness, pleasure and freedom (GOLDENBERG, 2011, p.82).

The family becomes a fundamental part of this process that occurs in old age, because in interpersonal relationships between all people there is always the opportunity for knowledge from the experience and that the older generations can leave as a legacy for the younger generations. It is clear that “[...] it cannot be denied, however, that the relationship between co-residence and levels of well-being depends on the

socioeconomic context, social policies and not only on individual characteristics and preferences" (CAMARANO; EL GHAOURI , 2002, p.24).

Living with the elderly in families, where there are strong affective bonds, can influence the education of their members, especially in the education of their grandchildren, as as stated by Aguiar (2005, p.88), "There is no exclusive way to develop education, because every day at all times they mix life with education. The act of educating happens at different times in life without having a responsible person ". According to Barros (1989, p.36), the transmission of symbolic goods / values between the elderly and their grandchildren are considered an inheritance for future generations, yet, "[...] they are rituals of introduction into social life and the adult world ”.

Thus, the elderly become more valued and recognized as “capable” of contributing to the development of children and adolescents and, on the other hand, children learn to respect and value the aging phase. In this perspective, Senator Omar Aziz (PSD / AM), through Senate Bill No. 501/2015, emphasizes that the theme of human aging should be part of the curriculum of Basic Education, establishing this Project in the Guidelines and Bases of National Education (FEDERAL SENATE, 2015).

The increase in life expectancy (longevity) means that families and other social spaces have experiences of living with different generations, in what is called intergenerational experiences. These intergenerational interactions of children / young people with the elderly are increasingly frequent and this causes them to strengthen and / or create socio-cultural practices valuing / respecting human relationships, but mainly, the process of aging, both in family arrangements and in social spaces, as explained above in the Senate Bill in Transition. Social policies must pay attention to these intergenerational interactions resulting from the Brazilian demographic dynamics, which makes us experience aging and its dimensions (culture, health, education, leisure, among others).

#### **4. Conclusion**

Family relationships have changed over the years due to the decline in fertility and the insertion of women in the labor market, such changes have brought new forms of family arrangements along with the current demographic scenario. The contemporary families of liquid and complex modernity highlighted by Morin and Bauman are composed of the diversity in family arrangements, both of a family extended by consanguinity, that is, the presence of elderly (grandparents), uncles and others, and of families without the bond blood starting from a sentimental bond, like homoparental families, families that went through separations even without blood ties, among others.

Currently, most families have an elderly component, whether they are elderly people's home (elderly as head of the family) and / or home with elderly (child or other relative as head of the family). In the vast majority, in Brazil, elderly housing prevails, in which the children (grandchildren, daughter-in-law) live with their parents / elderly, in which this fact is influenced by the economic and social factor.

However, there is still a smaller proportion of households with elderly people, which are influenced by the increase in life expectancy, predisposition to chronic-degenerative diseases and decreased functionality, which causes these elderly people, that is, older elderly / elderly ( 75 to 90 years old), are dependent on the help of the family member (child). In this sense, intergenerational meetings happen more frequently

through exchanges of experiences between the elderly and young people / children, both at home / family, and in other social spaces, such as school, neighborhood meetings, university, among others. Such coexistences of different generations strengthen socio-cultural practices by valuing and respecting human relationships, mainly helping to maintain dignity in old age, as old age is also considered as a phase of human development that presents more knowledge and cultural knowledge, and this should be shared by the present generations (young people), thus making the elderly more recognized and useful in inheriting symbolic goods for future generations, maintaining their well-being and dignity in old age.

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## 6. References

- [1] AGUIAR, Luciana. *Gestalt-terapia com crianças teoria e prática*. São Paulo: Editora Pleno, 2005.
- [2] BAUMAN, Zygmunt. **Modernidade líquida**. Tradução Plínio Dentzien. Rio de Janeiro: Jorge Zahar Ed. 2001.
- [3] BAUMAN, Zygmunt. **Sociedade Individualizada: vidas contadas e histórias vividas**. Tradução José Gradel. Rio de Janeiro: Jorge Zahar, 2008.
- [4] BARROS, Myriam Moraes Lins de. Memórias e Família. **Estudos Históricos**, Rio de Janeiro, v. 2, n.3, 1989. p. 29-42.
- [5] BRASIL. Constituição da República Federativa do Brasil de 1988. **Diário Oficial [da] República Federativa do Brasil**, Poder Executivo, Brasília, DF, 5 de outubro de 1988. Disponível em: <[http://www.planalto.gov.br/ccivil\\_03/constituicao/constituicao.htm](http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm)>. Acesso em: 18 março 2020.
- [6] BRASIL. Secretaria de Direitos Humanos da Presidência da República. **Brasil: manual de enfrentamento à violência contra a pessoa idosa. É possível prevenir. É necessário superar**. Texto de Maria Cecília de Souza Minayo. — Brasília [DF]: Secretaria de Direitos Humanos da Presidência da República, 2013. Disponível em:<<http://www.cedi.pr.gov.br/arquivos/File/CEDI/ManualViolenciaIdosogovfedweb.pdf>>. Acesso em: 19 março 2020.
- [7] BITTAR, Eduardo Carlos Bianca. FAMÍLIA, SOCIEDADE E EDUCAÇÃO: um ensaio sobre individualismo, amor líquido e cultura pós-moderna. **Revista da Faculdade de Direito da Universidade de São Paulo**, São Paulo, v. 102 p. 591 - 610 jan./dez. 2007.



- [8] CAMARANO, Ana Amélia Camarano (Org.). **Novo Regime Demográfico: uma nova relação entre população e desenvolvimento?** Rio de Janeiro: IPEA, 2014.
- [9] CAMARANO, Ana Amélia; EL GHAOURI, Solange Kanso. Famílias com Idosos: ninhos vazios? **Anais XIII do Encontro da Associação Brasileira de Estudos Populacionais**, Ouro Preto, Minas Gerais, Brasil de 4 a 8 de novembro de 2002.
- [10] CAMARANO, Ana Amélia; KANSO, Solange; FERNANDES, Daniele. **Brasil envelhece antes e Pós-PNI**. In: ALCÂNTARA, Alexandre de Oliveira; CAMARANO, Ana Amélia; GIACOMIN, Karla Cristina (Orgs.). **Política nacional do idoso: velhas e novas questões**. Rio de Janeiro: IPEA, 2016.
- [11] CAMARANO, Ana Amélia; MELLO, Juliana Leitão e. **Cuidados de longa duração para a população idosa: um novo risco social a ser assumido?** Rio de Janeiro: Ipea, 2010.
- [12] CASTILHO, Fernanda; NERING, Érica; PASSOS, Mateus Yuri. Reflexões teóricas sobre a produção científica: métodos de pesquisa social na área dos estudos de comunicação. **Conexão-Comunicação e Cultura**, USC, Caxias do Sul, v.14, n. 17, p. 83-107. Disponível em:< <http://www.ucs.br/etc/revistas/index.php/conexao/article/view/3015/2146>>. Acesso em: 31 março 2020.
- [13] IBGE. Instituto Brasileiro de Geografia e Estatística. **Mudança Demográfica no Brasil no Início do Século XXI: Subsídios para as projeções da população**. Estudos e Análises Informação Demográfica e Socioeconômica, n. 3, Rio de Janeiro: 2015.
- [14] GOLDENBERG, Mirian. Corpo, envelhecimento e felicidade na cultura brasileira. **Revista Contemporânea**, edição 18, v.09, n.02, 2011. Disponível em:< [http://www.contemporanea.uerj.br/pdf/ed\\_18/contemporanea\\_n18\\_06\\_Mirian\\_Goldenberg.pdf](http://www.contemporanea.uerj.br/pdf/ed_18/contemporanea_n18_06_Mirian_Goldenberg.pdf)>. Acesso em 31 março 2020.
- [15] KROTH, Vanessa Wendt. As famílias e os seus direitos no Brasil: Conceituação sócio-histórica, previsão legal e decisões judiciais do Supremo Tribunal Federal e Superior Tribunal de Justiça entre a Constituição Federal de 1988 e o Código Civil de 2002. **Dissertação de mestrado** do Programa de Pós-Graduação em Sociologia Política da Universidade Federal de Santa Catarina - Centro de Filosofia e Ciências Humanas, Florianópolis, 2008, f. 275.
- [16] KÜCHEMANN, Berlindes Astrid. Envelhecimento populacional, cuidado e cidadania: velhos dilemas e novos desafios. **Revista Sociedade e Estado**, Brasília, v.27, n.01, p.165-180, 2012.
- [17] MORIN, E. **Ciência com consciência**. Rio de Janeiro: Bertrand, 2000.

[18] MOTTA, A.B. da. A atualidade do conceito de gerações na pesquisa sobre envelhecimento. **Revista Sociedade e Estado**, São Paulo, v.25, n.2, p. 225-250, maio-ago.2010.

[19] OLIVEIRA, Rita de Cassia da Silva. Velhice: teorias, conceitos e preconceitos. **Rev. A terceira idade**, São Paulo, v.12, n. 25, p. 37-52, ago. 2002.

[20] OLIVEIRA, A.C.R. de; SANTANA, P.M.S. de. Famílias Homoparentais: reflexões acerca do ser família na contemporaneidade. REDOR, 18 com o Tema: Perspectivas feministas de gênero: desafios no campo da militância e das práticas, 24 a 27 de novembro de 2014. **Anais do 18º REDOR...** Recife-PE: Universidade Federal Rural de Pernambuco, 2014.

[21] SENADO FEDERAL, **Lei do Senado nº 501 de 2015**. Brasília [DF], 2015.

[22] SILVA, A.; DAL PRÁ, K.R. Envelhecimento populacional no Brasil: o lugar das famílias na proteção aos idosos. **Argumentum**, Vitória (ES), v. 6, n. 1, p. 99-115, jan./jun. 2014.

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