Scientific and Academic Facts of Gerontology

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SUMMARY

Studies on old age and aging have opened a series of discussions from the origin of the object of study, as well as from the philosophical principles, construction of the epistemic base until reaching the reflection of training and profession. The literature review brings us closer to understanding, it is of utmost importance for the construction and analysis of knowledge. The approach to these points arises from the vision of general science and is specifically directed to gerontology, which is a vehicle to transit through the objectives set out here. It is interesting to elucidate the construction of the origin of gerontology itself, not only as an etymological element but also from the formation of the discourse that gave rise to what would become the field of knowledge that it is today.

The review of scientific literature allows us to recognize the importance and value of gerontology and, above all, its field of application, its contributions to the knowledge of older people seen, for example, from the life cycle. It allows those interested in the field raised here to recognize the double reading of old age, one from the biological sciences, the other from those of a social nature. When going through the intricate points of life, it does not seem strange to recognize the critical moments of the aging process, which constitutes a substantive part of the stages of life to ultimately become a matter for everyone, but not always understood in its entirety. In conclusion, it is possible to conclude on the obvious need to continue analyzing and constructing not only the necessary discourses but also the epistemological and philosophical principles of the study of old age and aging, understanding that gerontology is constituted not as a science in its own right but as a crucible that enriches a dynamic and inexhaustible scientific discipline.

Keywords: Old age, aging, science, epistemology

INTRODUCTION

Studies dealing with old age and ageing have been a substantial part of various branches of knowledge. Thus, specialized areas have emerged in the study of these aspects. A clear example is gerontology and geriatrics. Understanding the purposes of our proposal, as well as its scope and importance contributes to understanding the relevance of the present work. The review also explores the procedures to validate our argument.

Gerontology is understood from the etymological base as the study of old age, while geriatrics is in that same line established as the medicine of the old. In a strict sense, gerontology is closely related to social sciences, social work and the theory of well-being, however, it has a purely biological and psychological aspect that is essential in the study of old age. One of the purposes of this writing is to reflect on the appropriate terms and the use of concepts derived from gerontology and areas of knowledge that address old age and aging as a nodal part of their interest, due to the identification of several of these concepts used as synonyms and that do not necessarily correspond to the appropriate use of the epistemological discourse of the disciplines.

To understand the conceptual origin, let us take into consideration that, since gerontology is of a social nature or of the health sciences, the nodal concepts are necessarily multidisciplinary. For example, medicine is nourished

like a tree by various concepts born in various disciplines. From experimental science to magic, all areas of knowledge come together to try to get closer to understanding the human phenomenon. In all cultures, for example, they have developed the means to take advantage of the best of the available knowledge for the benefit of health. In ancient peoples, the concepts of health and illness were framed in the religious magical fabric of the conception of the world or their worldview. Based entirely on an empirical attitude towards health and illness, it was enriched by the prevailing philosophy of the Greco-Latin world. At that same time, the paradigm of the human body and its various structures began.

Medicine also had a social character in ancient times. The spread of some diseases served as a basis for the various types of legislators to include a section on how to avoid contagion and how to prevent daily life from being conducive to increasing the types of contagion (Rodríguez, 2006, p. 47). The figure of legislative action fell on criminal actions such as the formation of a health police that looked for sick people hiding in their homes and who were established as sources of infection, whether leprosy, plague, typhus or tuberculosis. In other words, the fields of interest were not only biological, but a social response was structured. With the gradual division of labor, the preponderance of certain diseases among practitioners of a certain trade was also established, and occupational medicine was derived from this. The relationship between the body's response capacity and its level of nutrition was also established and it was confirmed that the disease progresses differently in a well-nourished individual than in a weak one. The importance of daily habits of physical activity and even recreation enriched therapy. The social dimension in health sciences involved the incorporation of statistical methods to the study of populations. In more recent times, health sciences and of course medicine, with the increase in health care costs, have seen elements taken from fields as varied as sociology, anthropology, logic, philosophy, ethics, economics and the humanities incorporated into their theoretical corpus. Public health, in fact, recognizes part of its foundation and that it is based on the eradication of the presence of diseases and a great increase in life expectancy. The ethical and legal aspects of medicine are already its philosophy of service.

This is how the current biopsychosocial-cultural model of medicine has been formed, in which multidisciplinarity is evident.

Development

In keeping with the idea of inter- and multidisciplinarity, concepts in the social sphere are constructed from the sense of dialogue and dialectics that includes the relationship between concepts, words and actions. These concepts, which tend to age and expire, take up Bunge's premise (1997, p. 145; 2005, p. 54) when he points out that science is referential and that it is feasible to be modified. Between dialogues and debates, common and even universal interests appear; it is feasible that global concepts and languages appear in social and financial complexes or in local or national techno-scientific culture.

In the midst of the enormous diversity of concepts and messages, there are new developments that tend to become generalized. Among them, those that wish to highlight the aesthetic aspect of the discourse rather than the consistency and explanatory capacity stand out (Osorio, 2016, p. 11). The real situation of the various conceptions and expressions necessarily leads to highlighting the search for unity in the diversity of the social sciences. It highlights the need to restructure the concepts, apply them, adapt them or adapt them to the new needs of the inter, multi and trans discipline that responds to the plurality of the social sciences. It is necessary to locate their origin, their historical legacy, their diagonal and dialectical processes, as well as their current location and their possible adaptation to new models and perspectives.

González Casanova (2007: 207) refers that it corresponds to the current moment of internal and external struggles of scientific thought to build a dialogue and a debate between phenomena of persuasion, challenge, verification, refutation, rhetoric, method, theory and practical application, between designs, models and these definitions are in no way "the absolute truth nor the last word."

What is the scientific character of gerontology? We can certainly see that gerontology has similarities, due to its origins in the application of social welfare and later in social work. Other areas that enrich work with older people derive from social management and administration, as well as from various psychological bases.

The use of the concepts of discontinuity, rupture, threshold, limit, series, and transformation raises not only procedural issues for any historical analysis, but also theoretical problems. It is undeniable that, in general, it is accepted that the social categories and representations with which we act are constructed from the "truth," which constitutes it as valid and acceptable (Gergen & Gergen, 2011, p. 23). In this sense, in order to establish a specialized, unified, and consensual dialogue, it is advisable to free ourselves from a whole set of notions that diversify, each in its own way, the theme of continuity. Once they lack a rigorous conceptual structure, but it is effective. Such is the notion of tradition, which tries to provide a singular temporal status to a set of phenomena that are both successive and similar to each other. It allows the same thing to happen when rethinking the dispersion of history in the form of this, it authorizes to reduce the difference inherent to every beginning to go back without interruption in the indefinite assignment of the origin, to the decision of the individuals themselves. The same occurs with the influences that provide a weak support that prevents the transmission of the facts and limits communication once it is the discursive limitations themselves that prevent a growth in the terms and concepts. Terms such as development and evolution are an example of the above, since they allow the limited grouping of a succession of dispersed knowledge to group them in unified categories. Another example of this are the terms of mentality that allow to establish between the simultaneous or successive phenomena of a given era a community of meaning, symbolic links, a game of similarity and the use of concepts in the construction of discourses are taken for granted. I believe that there should be concern about these groupings. Not even the "specialists" manage to demonstrate the validity of their concepts and of course, the validity of their discourses. We are then faced with a phenomenon of epistemic rupture, but at the same time also with the opportunity to deconstruct what has been done, to construct it and to deconstruct the elements. This is emphasized with greater reason when it comes to analyzing sets of statements that at the time of their formulation were distributed and characterized in a different way (Castro, 2011, .91).

Given the above, where is the theoretical body of gerontology located? It is feasible to identify the process: statements that are different in form and dispersed in time constitute a set if they refer to one and the same object. Just as Foucault (2010, p. 58) understood the construction of the differentiated concept of madness, in this case the statements that belong to gerontology seem to all refer to that object that is outlined in different ways in individual or social experience and that can be designated as old age. Now, I understand that the concept of old age does not allow us to individualize a set of statements and establish between them a describable and constant relationship at the same time for two reasons; first, we would be wrong if we asked the aged person what it is to be old, how the concept of old age is constructed and of course how one ages. Old age has been constituted by the concept itself, thus unreflective and more adjectivized in addition to the discourses that have shaped it, try to explain it, judge it, describe it. And we can go further, in gerontology we identify sets of statements that, far from referring to a single object formed by a common corpus and preserving it indefinitely.

The concept of old age has been constituted by the set of what has been said in the group of all the statements that named it, described it, indicated its beginning, characterized it, however that set of statements is far from constituting a single object, formed once and for all and preserving it indefinitely as its horizon of inexhaustible ideality as a correlate of social and moral attention to the elderly since the 19th century, which of course is not the same as today, there are discourses of exaltation of closeness, of counseling in the same way that theoretical discourses and methodological approaches have changed, since they are not the same old people, nor their illnesses nor their ways of suffering.

As obvious as it may seem, from this multiplicity of elements and factors a homogeneous unit of its own that serves as a reference point, as Kuhn mentions with the paradigms (1971, p. 126), is not fully formulated. In the terms developed from history, we seek this new concept that would not emerge if we continued searching for and studying historical data with the sole purpose of answering the questions posed by the non-historical stereotype that comes from textbooks because they often give the impression that the content of science is exemplified only by the observations, laws and theories that are described in their pages. In that same almost regular way, the same books are interpreted as if they said that scientific methods are simply those illustrated by the manipulation techniques used in the collection of data for the text, together with the logical operations used to relate that data to the theoretical generalizations located in the book or discourse. The result has been a series of concepts of science with profound implications for its nature and development.

Based on this series of reflections, it is estimated that the discourse regarding old age should perhaps be formed

not as a single discourse but as a whole that, when unified, can be applied and applied in various instances of the process, according to the problem, the area of emphasis and, of course, to the new paradigms that arise from the knowledge revolutions. The characteristic relationship that would allow the individualization of a set of statements related to old age would have to emanate from those where it is named, described, judged and alternates with the other branches of human knowledge. Although it seems simple, the formation of discourses on old age is not necessarily built on the existence of the object "old age" or the consideration of a single horizon of objectivity. Rather, it would be the result of discourses that point out, but do not participate, judge, but do not propose and, in the end, determine, but do not understand. Furthermore, the unity of discourses on old age is represented as adequate and correct, which generates a "comfortable and correct" position from those who generate and exercise them (Foucault, 1983, p. 63).

To better understand this, a brief reflection on the study of old age is proposed. From the second half of the 20th century, the elderly stopped being shadows to become actors, people who could decide, or at least that is what they tried to do. However, we can make one thing clear. They stopped being objects of medicine, the illnesses and health problems of the elderly permeated other areas of knowledge, for example, the social management of the social worker based on the welfare state or the economist who saw how the number of retirees increased and their retirement profiles were not entirely clear. The representations of a decadent body began to be transformed into an aged but autonomous or functional one. New classifications were derived for biologists, they spoke of old age, for psychologists of senility, while for scholars of society it was included in old age as a process, as a phenomenon and as a result of a paradigmatic change from any theoretical approach (Samaja, 2009, p.41).

All these alterations that lead to the threshold of a new gerontology have been slowly deposited in attempts at a gerontological discourse. If we wanted to define this discourse by a codified and normative system of enunciation, we would have to consider that the discourse is constructed from the rules that have made possible the merely perceptive descriptions and observations mediated by instruments, purely empirical protocols of experience, which invite us to characterize precisely the heterogeneity that these statements present, the way in which they are implicated or excluded and, of course, the transformation they undergo, the game of their relief and their replacement over time.

In the event that they could be described, the determined number of statements implies the presence of discursive dispersion, that is why each specialist person enunciates his definition of gerontology and old age, he does so from the empirical form or from the encyclopedic knowledge that is sometimes formed as a "school" or "tradition" but is far from generating it from a formal enunciative series or from the theoretical training that supports science or scientific discipline itself (Bourdieu, 2024, p. 31). Therefore, it is not uncommon to appreciate a dispersion on the methodological conception of inter, multi and trans disciplines.

Therefore, it is pertinent to propose that the types of enunciation, concepts, thematic choices, approaches or models should concentrate on a discursive formation that avoids terms such as geriatrician, gerontologist, gerontogeriatrics and can focus on the identification of the indicative domain of the application, whether theoretical or pragmatic, as in the case of Millán Calenti (2011, p. 52) who specifies the gerontological user and the geriatric patient according to the needs and contexts of the person and the professional or practitioner who cares.

This makes it possible and imperatively supports the fact that the rules of formation are conditions of existence, coexistence, conservation, modification and disappearance in a real structuring of the discourse. At this point it is possible to mention in a strict sense the professional training (gerontologists academically trained as such) and the profession (people who do not have a professional degree, but with the necessary knowledge to deal with some of the topics addressed here).

In a more philosophical sense, it is proposed that, in discursive formation, one should allow oneself to be guided by falsificationism (Chalmers, 1982, p. 76) which significantly supports the abandonment of statements that imply that discourses can be established as true or probably true in the light of praxis or observational evidence, since the merely empirical makes the construction of even speculations or conjectures rarefied and that they are anchored in the human intellect. Once the speculations have been generated, they can be subjected to conceptual convention; however, there is a risk of producing local statements that avoid convention as such.

There is an emphasis on recognizing the non-dogmatic characteristics of science, such as its flexibility or its ability to be referential, since this makes it easier for science to progress through trial and error, conjectures and refutations. With pride, specialists and generators of knowledge can reach a convention without worrying about how long it will take for the statement or discourse to be modified.

In light of what has been written and as an example of the above, it is possible to cite Yuni's intention (2011, p. 74) that by constructing a paradigmatic form allows us to speak of the Course of Life, which integrates theoretical and modeling currents of gerontology. This constitutes an epistemic matrix for the multidimensional and interdisciplinary description and interpretation of human development throughout life. In itself, the paradigm of the Course of Life replaces the metaphor used by traditional gerontology of cycles, stages of nature with the notion of course that has a connotation of journey, trajectory and indeterminacy that enables the expansion of approaches, but lands on a single interest. Such is the proposal of the Course of Life centered on a contextualized analysis of change in which development is the product of the intersection of a system of norms that regulate it, with the mediations that the person himself introduces as part of a social group. The essence of human development is that discourse is built from its changing nature as the person ages and his or her consciousness focuses on it.

One particular contribution that I must highlight is the emphasis on not only intra-individual but also inter-individual variations. In this way, the thesis of the universalism of change and its uniformity in relation to behaviours defined by chronological age are displaced by the dynamic conception that underlines diversity and eliminates homogeneity.

The contributions to the Life Course paradigm are the product of a series of conventions, summaries, essays, accepted and corrected errors that recognize the need for conceptual and enunciative redefinition that traditional gerontology has permeated in its history and that sometimes stagnates the opportunity for development and generation of knowledge about the aging process, the understanding of old age and the formation of the aged person as an object of study.

DISCUSSION AND CONCLUSIONS

Old age as a phenomenon inherent to the human condition has been addressed in different ways and, therefore, the elderly have had different social treatment and the significance of being old can be as broad as the social group makes it.

Despite the reductionism prevailing in today's society, in which the elderly are considered from a positivist point of view that is apparently objective, physical and without any further cultural implications, the fact of aging has a profound biological, psychological, social and cultural meaning, since each person who ages does so in a specific sociocultural context in which it could be interpreted as meaning that people are the only ones who age.

This is when aging becomes more noticeable as it affects social processes such as representation, social and generational relationships. In the economic sphere, the standards of retirement, health care and even advice and support in addition to the necessary care are modified.

The concept of old age has been deeply marked by social and cultural factors that influence the acceptance of the elderly person, as well as their social role or the way of relating to them.

From the exaltations of wisdom and experience, to a reference to the stage of life or a referential indication, to the politically correct and inclusive concept, all moments have been permeated by the ideological construction of the predominant moment. In this way, at each stage of the social history of humanity, the elderly have been part of it as a social actor but also as an element appropriately "distanced" from their own group. Ranging from that family freedom to a slight distancing and possibly reaching the confinement of a nursing home with specialized care where they become someone else's concern and problem.

If science is the constellation of facts, theories, and methods assembled in today's textbooks, then scientists are men who, successfully or unsuccessfully, have endeavored to contribute some element or another to that

particular constellation. Scientific development becomes the gradual process by which these concepts have been added to the growing body of scientific knowledge and technique, and the history of science becomes a discipline that chronicles and records these successive increments and the obstacles that have defined their accumulation.

In relation to the above it is possible to consider that the determination of shared discourses is not, however, the determination of shared rules. This requires a second stage, of a somewhat different kind. In doing so the theorist must compare the discourses of the community with each other and with its current research reports. In doing so, his starting point is what isolable elements, explicit or implicit, the members of that community may have abstracted from their more global discourses and used as rules in their research. Anyone who has tried to describe or analyse the evolution of a given scientific tradition will necessarily have looked for accepted principles and rules of that kind.

Thus, we have mentioned that from a purely theoretical point of view discourses could determine normal science without the intervention of discoverable rules. This process of learning by study and practice continues throughout the initiation and professional development process. As the student progresses from his first year of study to the doctoral thesis and beyond, the problems assigned to him become increasingly complex and less precedent-based; but they continue to follow closely the pattern of previous achievements, as will the problems that normally occupy him during his subsequent scientific career independently. These consequences of scientific education have a reciprocal which provides a reason for supposing that discourses guide research both as direct models and by means of abstracted rules. Normal science can proceed without rules only so long as the relevant scientific community accepts without question the solutions of particular problems that have already been carried out. Rules must therefore become important and the characteristic casualness towards them must disappear, whenever discourses or models are felt to be unreliable. The period preceding the discourse on everything is regularly marked by frequent and in-depth debates on methods, problems and standards of acceptable solutions, even though these discussions serve more to form schools than to produce agreements. In the case of gerontology, it is clear that, although it has a purely scientific origin, it does not become a science but rather a scientific discipline that is enriched and nourished by other sciences and disciplines and that its inter, multi and transdisciplinary nature allows it to do so and at the same time strengthens it in order to overcome limitations and at the same time enrich and advance its own path.

Such is the path to follow, such are the notions that must be deconstructed, constructed, reconstructed, such are the pretexts, texts and contexts that must be elucidated regarding old age. We will have to put the analysis of the statement and the discourse to the test, face the risks, accept the failures and persist in reaching agreements and conventions, avoiding over-interpretation and assumptions. Nothing is certain until we take the first steps.

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STATEMENTS

1. This paper did not require ethical autorización in human sor animals.
2. The authors declare that there is no conflicto of interest.
3. It is declared that there are not links, references or public data avaliable.