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Healthcare and development: a dialog with the thinking of Celso Furtado

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Abstract *Understanding that conditions of health are dependent on more general nationwide factors relating to the level of development means admitting that 'sectorization' of health service is something that tends to limit the formation of knowledge. It also points to the importance of investigating the relationship between health and development, including issues about the processes that feed the persistence of the polarization between modernization and exclusion which has been a history of Brazil's contemporary development. This paper, based on a review of the literature, aims to look more deeply at the structural conditioning factors of the relationship between health and development, and their reproduction in the formation of contemporary knowledge, based on a dialog with the ideas of Celso Furtado. It concludes that a 'virtuous' articulation between health and development calls for policies that are able to reconcile the antagonistic factors represented by the interests of capitalism, and the interests of social wellbeing, in a harmonious co-existence. In Furtado's conception, this would be possible, if the process of social homogenization is correlated with an efficient production system that has a degree of technological autonomy.*

Key words *Development, Collective health, Brazilian Single Health System, Innovation*

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Introduction

In Brazil, associations made between progress and health are not a recent phenomenon: they were already present in the discourses of Brazil's Presidents Getúlio Vargas (in the 1940s) and Juscelino Kubitschek (in the 1950s). In the subsequent two decades, theories on development inspired studies by medical doctors and intellectuals about health and economic and social relationships. Issues such as the right to medical care, the socialization of health services and the nationalization of the pharmaceutical industry were investigated by authors such as Samuel Pessoa, Mário Vítor de Assis Pacheco, Mário Magalhães, Álvaro de Faria and Carlos Gentile de Mello[1].

The knowledge that we have inherited has made it possible to re-examine the relationship between the fields of health and development. The positive concept of health – as an inherent condition of social welfare and of the full exercising of citizenship – has brought with it questions about the instrumental correlation between health and development, which have, in turn, resulted in the guidelines that have oriented Brazilian Health Reform (conceived on the basis of criticisms of the preventive and medicalizing models), and in the perception that structural change in the relationships established between society, the market and the State are essential[2].

The comprehension that health conditions depend on more general national factors – relating to the level or pattern of development, and an autonomous and competitive presence in the global economy – with repercussions on aspects such as income distribution, poverty, nutrition, water and sewerage services, level and pattern of economic growth (socializing or excluding) – has meant recognizing that dividing health into sectors is a factor that both limits the scientific field and the population's quality of life. Forecasts based exclusively on reiterations of the social asymmetries of the past or supposed opportunities for leveraging economic subsectors in the present scenario of economic adversity should, therefore, be discussed. One should question the policies on which they are based and that legitimize them. This is especially true when considering the importance of seeking a path of development that is capable of leading us to a growing homogenization of our society[3,4], and one that should include a rupture of the processes that feed the persisting modernization/exclusion polarization that has been a mark of the history of contemporary Brazilian development.

Recognizing that there is an inseparable union between economic and social forms has resulted in the perception that we need to release Brazil from the 'vicious circle' to which it has been submitted by its colonial heritage. This has also suggested the need for change, which includes change in the economy – where the origin of the obstacles being confronted can be found, and that could be the locus of their being overcome, since the pattern of Brazilian development has certain critical limits.

The analyses that relate to health and development, carried out since the year 2000, have thus included an investigation into the connections between social rights, innovation and the dynamic structure of the 'Medical-industrial Complex', the theoretical formulation of which is a systemic interrelationship between productive segments of the secondary and tertiary sectors involved in the healthcare production chain[5].

The political, economic and social interests dynamized by this base are varied, and often conflicting: it is especially because they reflect the culturally dominant forces – in this case, compliance with the interests of wealth accumulation commanded by the transnational companies – that one can affirm that technologies are not neutral[4]. From the point of view of the tensions between social development and power, innovation and democracy, and of the consequences to the production and access to health goods and services, any consideration of the productive base involved in a health system is essential in orienting and supporting sectorial and intersectoral public policies.

Technological progress can both be the basis for economic development and, at the same time, exacerbate social inequalities – if, for example, health promotion, prevention and care are provided on the basis of unequal access to new technologies and on the establishment of a differential in exposure to the risks caused by environmental interventions and iatrogenic procedures. Furthermore, the discrepancies that exist between access, quality and cost of innovation put the theme at the center of the debate on the creation and sustainability of Brazil's Unified Health System (*Sistema Único de Saúde*, or SUS), which shows their importance to health policy.

Based on a review of the literature on the subject, and a historical approach, this paper aims to achieve a more in-depth understanding of the structural conditioning factors involved in the relationship between healthcare and development and its reproduction in the formation of knowledge, refocusing on the developmentalist

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theory that was put forward by Celso Furtado to help analyze the contemporary context.

Its importance lies in the need to make progress in our understanding of how to conduct economic activities in such a way as to achieve an approximation between the national Welfare State System and the National System of Innovation in health – as proposed by Furtado. By recovering key concepts of social homogenization and productive autonomy, this paper emphasizes the importance of molding the development of this productive base in such a way as to ensure that the demands of the population are able to guide technological development and the processes of innovation.

Vitalism and the medical-industrial complex

During the 1960s, in a bid to understand the relationships existing between science, medicine and the discourses on health and illness, health was cast as the object of scientific investigations and theoretical reflections in various fields of knowledge. The set of ideas according to which knowledge about the process of illness results directly from attempts to reinstate health was questioned. Illness, at that time, was understood not only as a manifestation of lived experiences that cause disorders, but also as an alteration of the outlines of the concept of normality, a phenomenon distinct from suffering[6].

Perfect health was thus considered to be no more than a concept about an ideal type. Its comprehension was freed from physiological metrics, since "the normal man is the normative man, the being capable of instituting new norms"[7]. Illness, in turn, was to be understood as the production of new forms of adaptation between the organism and the environment. In principle, what has been represented as abnormal is, often, the forewarning of a new set of norms, because: "To the extent that living beings depart from the specific type", they may not be necessarily abnormal to the point of placing the specific form in danger, since they may only represent the evolution of the paths that lead to new forms[6]. In Brazil, this theory influenced Arouca[8], whose view was that medical care had a dual characteristic: it was not only a work process that aimed to interfere in vital factors – biological and psychological – but also a unit of exchange with which a historically established social value was associated.

As from the 1970s onwards, the quest for a better comprehension of the relationship between medicine and science found itself faced with new variables. Pressured by the spiraling costs of medical care, various publications emphasized the adverse aspects of the association between for-profit industries and philanthropic or community health services. Negative conceptions of this connection were also dealt with in international scientific studies, especially those focused on quantifying and revealing the profits obtained by the health industry, as in the study by Howard Waitzkin[9], which sought to show that, during the 1960s in the United States, coronary therapy units were widely disseminated even before any evaluation of their effectiveness in the treatment of heart attacks had been carried out.

These studies concentrated their efforts on adapting Marxist ideals to interpreting the "explosive growth of the health industry"[10]. The concept of the 'medical-industrial complex' began to be adopted by various authors for the purpose of investigating the relationships established between the interests of large companies producing 'supplies' for healthcare, including cooperation with the centers of research, and both health services and professional bodies[11].

To understand the medical-industrial complex one must first understand the concept of the industrial complex (a term derived, specifically, from the expression 'military-industrial complex'). One can observe that the productive chains of a national economy can be grouped into blocks, in such a way that the average value of the purchases and sales of the members of one block may be greater than in another. These blocks can be referred to as 'industrial complexes[12].

Traditionally, the concept of the 'industrial complex' is used as a tool for evaluating a grouping of industrial entities that can be seen as being organized, spatially or inter-sectorally, under the command of one industry that is their driving force. Defining one such complex calls for the construction of a matrix of transactions, from input to product, which enables information on the inter-sector transactions to be properly organized.

The understanding that configuration of the structures of production, their dynamic of activity and their connections with the concepts of the industrial complex, development and public policy is grounded, among other things, on constant proof of the evaluations of the models of balanced economic growth and of the necessarily beneficial effects of the growth centers. Development provides, as a rule, abrupt and vigorous prosperity of one or a few regions and sectors.

Once the instruments of diffusion and/or convergence of growth have been brought into evidence, a quality of essentialness is conferred on public investment. One should note too that as well as being a determinant in the generation of income and creation of productive capacity, balanced economic growth also means the optimization of productive investments, which themselves release new direct investments.

According to this theory, development organizes itself into centers, and there is no homogeneous distribution between different sectors and economic activities[13]. In other words, as well as being accumulative, it is unbalanced both in terms of sectors and in terms of location. For this reason, it is essential that one identify the industries that are the engines and centers of development. Given the potential of the technological transformations underway, or which are in demand, to stimulate the growth of sectors that are already consolidated and thereby turn them into engines of development, the relationship between different industries necessarily becomes dynamic. Innovation, thus, plays an important role in the conception of such centers, since the destabilizing influence of the 'engine' industries generates waves of innovation, and since empirical evidence of greater interdependence between sectors is numerous, thereby expanding the scope of activity of public and private sector organizations by incorporating activities above and below their sector chains. Therefore, more recent attempts to specify the shape and limits of industrial complexes have used arbitrary segregations and methodologies. These emphasize not only the added value and capacity for retention of the relationships between the purchase and sale of each component of the complex, but also the increased importance of the technical progress of sectors that tend to expand their participation in terms of value of production within the complex as a whole.

Developmentalism and health

In the 1970s, high rates of economic growth without a corresponding impact on social indicators – together with inputs criticizing the concepts of illness as being the antonyms of health, and worsening inequalities in access to health, imposed by the so-called medical industries – had as their corollary the characterization of the process of a conservative modernization of capitalist development. This model, originally developed in Germany and Japan, expresses a conservative political pact made between the nascent bourgeoisie and the existing oligarchs, with the objective of constructing a totalitarian and self-sufficient capitalist society. This view of capitalist development differs from the one followed by countries like England, France and the United States, where the bourgeois revolutions led to violent ruptures with the *Ancien Regime* and constituted an economic and social base that was independent, in capitalist and democratic societies.

In Brazil, conservative modernization lay behind the creation of a dependent bourgeoisie, which was unable to offer the nation a project for autonomous and hegemonic power and thus left its economy wholly dependent on the dynamics of the central economies, that is, underdeveloped in terms of both structure and self-sufficiency. It is in this sense that the developmentalist approach to health and public health is considered to be reductionist, because it confuses development with industrialization and because it credits improvements in living conditions and health exclusively to economic growth[14]. Rarely do the Brazilian economic elite link the process of accumulation of their wealth to any type of national or popular project[15].

In this context, the theoretical work that considered social aspects as being determinant of health conditions and health professionals as being the subjects of political practices, with a view to social transformation, failed to establish any direct links to the theories of economic development adopted by Furtado. These highlighted the imitative process of our development and the atavistic tendencies of society toward elitism and social exclusion[4]. In contrast to the path followed, Furtado argued in favor of the State being the entrepreneurial agent defining the orientation of the technological process, so that that process might not represent the transposition of a pattern that was already defined, and contextualized, as in the center. He argued that this was a *sine qua non* condition for the modernization of existing social structures, to replace the exclusion of unprivileged majorities that was a feature of Brazil's process of industrialization[16].

Contrary to Furtado's view, the contradictions between the effects of Brazilian economic growth and improvements in the population's living conditions – the profile of morbi-mortality, for example – caused the expression 'developmentalism' to become a reference to a model to be overcome as from the end of the 1960s[17].

As a consequence, in Brazil the expression 'medical-industrial complex' retained its origi-

nal restrictive connotation and was disseminated with two different interpretations[18,19]. The first, of an instrumental descriptive nature, corresponded to the capitalist interest in increasing the consumption of drugs and medical-hospital procedures, providing the grounds for extended coverage through basic health services. In contrast the second interpretation was self-explanatory, attributing to it the capacity to understand the structural inequalities existing in access to health services and goods. Two decades had to pass before the vigor and originality of Furtado's contribution began to be accepted as an important component of any reflection on Brazilian public health (especially in relation to understanding the phenomenon of underdevelopment occurring simultaneously with industrial development that deepened existing structural inequalities, and the adoption of an intentional development that was planned in more sophisticated economic ways).

In reality, Brazil's re-democratization and the qualification of health as a universal right brought to light the need to face the challenge of properly establishing the participation of healthcare within the structure of Brazil's development, one in which the production and diffusion of technologies is extremely asymmetrical, and is often dissociated from local needs for technological progress and knowledge[20].

At the same time, the need to seek a path to development that could definitively aim to overcome Brazil's backwardness in relation to the central economies brought Furtado's ideas back into the debate. These especially included the notion that overcoming a model that was marked by social dependence and exclusion would require an approximation between the System of Social Welfare and the National System of Innovation, giving a role of increasing importance to scientific and technological research in successful development models[21].

Particularly in the field of Collective Health, a revival of the Furtado concept appeared to meet the needs of discussing in detail a context in which one could see the nation's social determining factors and technical progress working side-by-side, providing an understanding of health not as a means, but as an indissoluble part of the development of a nation, since 'development' includes the interrelationship between its social and its economic fabric.

In this context, the development of a country would be intimately related to the opportunities made available to the population aimed at their wellbeing. Thus, a Brazilian development policy should be capable of making room for realizing the cultural potential of its population, thereby leading to the homogenization of its society[4]. Hence we need not only to support and encourage technical progress, but to guide new technologies so that they follow socially desirable and sustainable paths.

In this aspect, one can see that technological development is far from neutral, since it influences the pattern and standard of society at the same time as the socio-economic orientation and the institutionalities of a given nation influence it[22]. Public action should promote technological paths taken and innovations developed that are re-oriented to the quest of collective wellbeing, thereby interrupting the reproduction of the patterns of consumption of the minorities[23] that were established at the beginning of our industrial process and which have been perpetuated until today, to the detriment of the wellbeing and the standards of living and working of the great majority of the Brazilian population.

It is from this critical point of view that Gadelha[5,24] developed, in Brazil, the concept of the health economic-industrial complex, which aimed to ascertain, from the point of view of health, the extent of its social and economic dimensions. His idea was to build a vector of connection between the universalization of access to healthcare, improvements in the activities of the SUS, and the reduction in economic dependence on strategic areas, once again from the point of view of development. This concept, relating to a pre-selected group of productive activities that maintain inter-sectoral relationships in the purchase and sale of knowledge-intensive goods and services[5], made an allusion to a productive base coordinating 'future-carrying' technologies seen as essential to the country's development – including biotechnology, nanotechnology, fine chemicals, precision engineering, new materials, information and communication technology, among others. This had three main aspects: cognitive, analytical and political. Furthermore, it arose from a systemic approach to the production of diversified goods – such as medications, equipment, different materials and products for diagnosis, influenced by economic policies, geopolitical relationships and global value chains, destined to the health services organizations – oriented by the need for collective health and by public policies – and also conditioned by their installed capacity[25].

The contemporary context

In Brazil, the re-democratization process and the qualification of health as a universal right brought to the surface the need to face the challenge of dealing with the role and participation of health in the pattern of the country's development. This is one in which technological production and dissemination are extremely asymmetrical, and often dissociated from the local needs for knowledge and technical progress[20].

The task called for, and still requires: an effort to detail and understand the structure and the dynamic of the organizations and institutions involved in the health system; a closer look at their connections with economic and social development, their sustainability and their political mobilization; the establishment of policies capable of producing a 'virtuous agenda' aimed at reconciling the coexistence of interests that are in principle antagonistic to each other; and, an attempt to revive the role of science. This latter, based on a deepening of the perception of social reality, seeks to overcome conceptual constructs that do not have a root in our history, by listening to and translating the social forces that continue to exist without their own direct means of expression in Brazil[4].

According to this line of thought, the systemic understanding of health, considering also its economic and political conditioning factors and the productive basis (the health-industrial complex) mobilized by this field of knowledge, incorporates two meanings: 'Development' and 'Health'. The first derives from the concept put forward by Furtado when he advocated that development should be correlated with a process of social homogenization accompanied by an efficient productive system. It should have sufficient technological autonomy, and be adequate (in the analysis in question) to the epidemiological profile of the population, in such a way as to ensure that universal access to health is sustainable[23,25]. The second understands health as being a factor in articulating the process of production of goods and services within the scope of a group of sectors and institutions that interact in a systemic way. This characterizes the politicization of the concept – a consequence of its insertion into the structuring of welfare states within developing economies, as well as a wider conception of the understanding of health.

Understanding that the democratization of access to services in Brazil means a need for autonomy of production and orientation of technological paths of innovation in health was the subject of debate at the eighth Brazilian National Health Conference, in 1986. Problems were discussed at this event that arose from the dichotomized interests of health – characterized by the risk of subjugation of the processes related to the generation, use and dissemination of innovation in health to the interests of the large multinational companies and financial capital, capable of having deleterious effects on the greater part of the population[26,27]. At the time, and after a long period of economic adversity experienced by Brazil that began in the early 1980s, certain economic and social advances began to appear. These included, for example, low rates of inflation, lower interest rates, improvements in the conditions of consumption for a significant portion of the population, a reduction in external vulnerabilities through a reduction in debt and the expansion of international foreign exchange reserves, attempts to correct the trajectory of the exchange rate, and enactment of policies designed for economic growth, which signaled favorable outcomes even in the context of the world crisis. At the same time, however, the agenda of Brazilian under-development remained untouched and unresolved.

During the 2000s, discussion was resumed on the directions to be taken by Brazilian development, and in this context the role of the field of health was especially emphasized. This was in part because this is a field that is science and technology-intensive, and in part because it has the potential to densify and give direction to the fabric of production in such a way as to make the structure of supply compatible with social demand for health[28]. This represented a perspective that would overcome the pattern of modernization/exclusion so characteristic of the genesis of Brazil's development.

Consistent with this perception and with a macro-political orientation aimed at the defense of fundamental rights, combined with the perceived importance of universalism and a recovery in the mass consumer market, there was a clear move at this time to implement a series of guidelines and measures that placed the field of health – or at least its productive base – at the heart of the national development agenda. This perception enabled health to be recognized as a strategic variable for sustainable and competitive development in Brazil, in both the institutional and the scientific fields.

In the institutional field, the launch of the new *Policy for Industry, Technology and Foreign Trade*, in 2004, placed health firmly within indus-

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trial and development agenda, and this was later followed by a group of policies and programs issued by the federal executive power (including *Mais Saúde, Pacti, PDP, Plano Brasil Maior ENCTI,* and *Procis*), attributing the status of a strategic area of government to the health production system. At the same time, the growing recognition being attributed to this protagonist position manifested itself in a series of development initiatives and programs, which were oriented, at least theoretically, by an inter-sectoral approach. These formed the basis for mapping and adapting the regulatory framework, all taking into account a bias towards production in health governed by what was understood to be the demands of the population, based on the use of the State's purchasing power. In spite of such initiatives, the fragility of the health production base remains a challenge for the sector and indeed for the wider agenda of national development.

In the scientific field, there was a growing quest for greater densification of knowledge on the various dimensions that relate the field of health to that of development. In 2012 Brazil's tenth National Congress on Collective Health had as its theme the relationships between health, development and innovation. The proposed debate, "*Health and development: science for citizenship*", seemed to express an understanding of the challenges that now face health reform in order to make the principles of the SUS truly effective. It reflected a recognition, by the scientific community, of the importance of innovation in health and of the implications of not having a productive base capable of meeting the needs of Collective Health. In spite of efforts to confer a central role on the subject, few works were produced that dealt with the health system and whose scope of analysis included the importance of the autonomy of its productive base to the sustainability of the SUS and to the orientation of national development policy. This reveals an additional challenge – that of making progress in this discussion within the field of Collective Health itself.

The importance of a more in-depth understanding of and insight into the aspects inherent in the relationship between the field of health and that of development is clearly evidenced by the realization that there is an inter-relationship and interconnection with political, institutional, social and economic elements in giving direction to the Brazilian paths of innovation and the global dynamic of investments, as well as in the still timid progress being made to create scientific knowledge.

Final considerations

It is increasingly recognized that social and economic inequalities amongst the population mean inequality of access to what are considered minimum conditions for a healthy existance, while at the same time the transformation of the demand for care into the demand for health is a Brazilian historical, social and cultural process.

The awakening of economists' interest in health is connected both to their understanding of it as a product, an industry and a market, but also to its fiscal effects and the need for equilibrium in the public accounts. It is important to distinguish this field of the health economics from the other field, dealt within this paper, to reflect on health and development, which deals with the fact that a large part of the world's population used to live (and still does) in conditions of extreme poverty, a situation that calls for the adoption of specific policies to reverse this state of affairs and so improve the level of economic wellbeing[29].

In Brazil, two lines of interrogation have emerged from the reconnection between health and development. The first relates to the analysis of the problems of Brazilian economic development, still seen through the lenses of 'developmentalism', and the polemic here has gravitated around the possibility of the 'resumption of development', a 'new developmentalism', or the need to affirm a standard/pattern of development for the changes that took place in the world and in Brazil during the 1990s. The second corresponds to the evaluation of investments, especially those of public origin, destined for health through it being recognized as a right of every citizen and a duty of the State; the concerns identified here have been directed to the potential and to the limits of the applications of funds in the sector, taking into account health priorities.

At the same time, the resurgence of the subject of 'health and development' within the public agenda has been characterized by the recognition that investments in health can, as well as improving the population's quality of life, attribute to this sector a pattern of growth that is greater than that of others, since it is a highly innovative, and labor intensive sector, which provides even more incentive for investment. Starting from the assumption that "State and Capital are inseparable", researchers studying Collective Health, together with other academics, have decided to assess which State should be reconstructed, and the nature of its relationship with capitalism.

From the point of view of development, recourse has been made to the contribution of Celso Furtado, who diagnosed Brazil's underdevelopment as a structural problem, characterized by the position it occupies in the world's capitalist process. It was marked by its subordination and links to the expansion of the developed countries, and also, through the reproduction of standards of consumption and production that are contextualized in other cultures and propitiated by a stage of development different to that of Brazil.

Indeed, overcoming the country's condition of underdevelopment demands the promotion of structural transformation, cultural affirmation and a sovereign national construction of development. It is, therefore, a very complex task, and one which demands democratization and popular participation in the processes of decision-making that define economic policies. Thus, to struggle for a different future, thinking and acting on the basis of the 'Furtado matrix' as a starting point, necessarily means understanding the present historical context, and avoiding a repetition of the relationships of dependency that existed in the past.

From the point of view of health, any economic growth that fails to overcome underdevelopment should be questioned. One must argue for a path to development that has the capacity to provide, at the same time, technical progress and a greater degree of democratization, including confronting head on the extreme disparities that exist in different regions of the country. Intelligent and democratic planning, and an appropriate level of participation by the state, as highlighted by Furtado, demand action against inequalities, inequities and unemployment, that is to say, by expanding the role of the State for the purposes of reorienting the relationships established between State and Capital, including for the purposes of questioning capitalism. One should also highlight the importance attributed by Furtado to contrasting the logic of *ends* (which refers to our society, our culture) with *means* (which refers to the instrumental reason exclusively inherent to economic accumulation), and the importance of their being considered to be substantive values that express the interests of the collective as a whole.

Thus, a 'virtuous' articulation between health and development could naturally call for the establishment of policies capable of reconciling, in harmonious coexistence, the antagonistic factors that exist between the interests of capitalism and those of social welfare.

Collaborations

LS Costa was responsible for the design, design, writing, critical review and approval of the final version of the article to be published. L Bahia participated in the design, design, writing and critical review of the final version of the article to be published. PSC Braga participated in the design and writing of the article to be published.

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