

Proprietary logics, cognitive work, and corporate crisis

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SUMMARY

Introduction: the impacts of the interaction between Covid 19 and the susceptible population present very marked inter- and intra-state spatial variations, leading to the emergence of the role of impact modifier of national and regional health policies.

Objectives: the problem of examining these policies in depth is thus posed, seeking: a) via texts on sociology of organizations, the parameters of organizational planning in general and in health care, and the criteria that inspired, on the basis of the theory of the New Public Management, the corporatization of the SSN (Italian National Health Service); b) interpretations of critical economists who see in the growing role of the knowledge economy reasons for overcoming proprietary business logic.

Methods: on this basis, follows the analysis of the response which the SSN, as amended and also regionalized, gives to the complexity of the epidemiological situation, to inequalities in health care and access to services, to the corruptive phenomena in health care and to the presence in its services of cognitive workers endowed with wide professional autonomy.

Results: the powerful distorting role of proprietary logics emerges, inspired by the New Public Management that favors cuts in territorial services, privatization, and closure of participatory processes, with the effects of greater regional inequalities.

Particular problems emerge in the interactions with the cognitive work of health care workers, which cause conflicts with the ownership governance imposed with companies, deriving from the role of common good of knowledge and its benefit from the sharing processes, proper to the scientific method.

Conclusions: the hypothesis is developed for which current society, based on the knowledge economy, is positively affected by the conflict that cognitive work engages with proprietary logic, both by producing common management methods suited to the specific characteristics of common knowledge, and therefore useful for redesigning health care, as well as effectively contrasting the neo-Darwinian and negationist logics particularly strong among Anglo-Saxon elites, as well as producing promising breaks in the asphyxiating real substation that characterized the last 30 years of the capitalist economy.

Issues addressed

A lot occurred since the Italian National Health Service, with Law 502/92, was reorganized on the basis of corporate form 28 years ago. It was then considered more suitable, in times marked by the hegemony of the unique neoliberal thought, compared to the participatory and systemic model that inspired local health units. Meanwhile, the world has not stopped changing: not only has there been no end to history, but:

- inequality has increased and complexed in corporate and financial structures aimed at exploiting and amplifying it (1), also thanks to pressing and repeated processes of privatization and exploitation of the welfare systems; although its role as the cause of the causes has been defined and the damage it caused to the quality of life and the health of many has been quantified (2), at present, inequality is structured with suprematism¹ in a political proposal that legitimizes the sacrifice of the most vulnerable, given their social costs, taking advantage of the economic crisis caused by the pandemic;
- a central parameter in the organizational design of health services such as the epidemiological transition², is now fully falsified by the emergence of new and old epidemics and pandemics, making it clear the inappropriate preventive and care settings designed to manage only chronic degenerative diseases under the new conditions produced by neoliberal globalization;
- the climate crisis requires, according to several IPCC reports³, the rapid abandonment of fossil-related energy sources and the transition into a circular economy, all of which are in open contrast to the agenda of important countries led by supremacists (e.g. USA, UK, Australia, Brazil, Israel, etc.) which deny its existence, while extreme weather phenomena - heat waves, waterspouts, changes in vector diffusion ranges represent its common impacts in Italy;
- the environmental crisis sees a rapid decline in biodiversity, summary of the

¹ https://it.wikipedia.org/wiki/Potere_bianco

² This theory was originally postulated by Abdel Omran in 1971 (3). This author divided the transition epidemiological mortality in three stages, in the last of which chronic diseases replace infection as the primary cause of death.

Such a transition assumed that the replacement, over time, of infectious diseases by chronic ones was determined by the increase in life span as a result of improved health care and disease prevention.

³ The Intergovernmental Panel on Climate Change (IPCC) is an intergovernmental body of the United Nations that is dedicated to providing the world with objective and relevant scientific information to understand the scientific basis of the risk of human-induced climate change, its impacts and natural risks. Established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) and was subsequently approved by the United Nations General Assembly.

systemic impact of the degradation of environmental matrices polluted by risk producers protected by regulations that are functional to their interests, hence creating an *organized ineptitude* in which environmental prevention agencies are forced to allow the operation of linear and obsolete production systems: such is the case for plastics placed on the market without prior toxicological assessments, or the 6 million Italians forced to live in polluted territories of the SIN (National Interest Sites) where the monitoring of the dead and sick take place but no primary prevention is applied(4), a serious problem for the prevention departments, ARPA (Regional Agency for Environmental Protection) and the national plan of prevention, which, operating according to the above regulations, have difficulty in producing effective primary prevention on collective risk factors, often ending up protecting risk producers rather than the exposed;

- all kinds of conflicts of interest fill the legal chronicles of the health world and fuel both complotism and irrationalism as well as legitimate demands for management models capable of curtating them and making administrative health protection action transparent;
- the development and dissemination of new information and communication technologies have greatly enriched social interactions and knowledge sharing, creating awareness of the power of social knowledge available in general and of the power to solve the problems mentioned above. According to AA, we live in a “knowledge-based economy” (5-7) in which welfare systems (health, education, ...) and research and development have reached dimensions that overdo the production of material goods and would require different productive structures, capable of developing the common good knowledge, now subjected to forced attempts to capture its social value, thus inhibiting the social potential of cognitive work that produces it thanks to incessant processes of sharing and collaboration;
- Similarly, inequalities, precariousness, environmental degradation and climate crisis are subjectivating young and old people all over the world who are now fighting to try to ensure acceptable living conditions for themselves; the combination of biopolitical struggles and proposals carried out by social movements, cognitive work and environmental movements, constitute the main social forces which demand and support new corporate structures and new welfare systems (8).
- This takes place in a context of great uncertainty, determined by the economic effects of the Covid-19 pandemic on globalized production lines, by psychosocial effects on affected populations and strengthened by the presence of multiple crisis factors (environmental, financial, social and geopolitical) introducing a ruthless struggle between states and classes for the hoarding of resources. Positive developments for welfare systems in such a critical and uncertain situation appear strongly linked to

the ability to put in place expert programming systems, participatory and capable of guaranteeing effective and appropriate responses to the needs of citizens on the model of the United Nations millennium development goals (9-10).

It seems the time has come to go back to the basics, to ask whether the design parameters of the health organization support the adoption of the corporate form in health care, and more generally, in the entire welfare state, by beginning to assess the ability of health care companies to provide responses to the crisis factors recalled, and open a process of shared reflection to identify and experiment new organizational forms more suited to the problems of the present and to the complex socio-economic and epidemiological scenarios more likely in the short and medium term.

Objectives

Hence, the aim is to:

- 1) Recall the main parameters of organizational planning in health care and the explicit aims of the theoretical bases supporting its corporatization.
- 2) Analyze the functionality of corporate logics in reaching the legitimate aims of the SSN in relation to defined emerging problems such as: a) variations in the epidemiological framework; b) the presence of inequalities in health care and access to health services; c) opposing corruption phenomena and confidential associations; d) interaction with knowledge-intensive services and operators.

Materials and methods

This text is developed from the adoption of two interpretations of the phenomenon investigated.

The first, analytical, aims to define the parameters of organizational planning by referring to texts of sociology of organizations summarizing the main theoretical approaches in sociology of organizations (11-14), while the work of Henry Mintzberg (15-16) has been referenced regarding the organizational planning in health care. This allowed to identify, in the perspective that sees the organization as a machine resounding to proprietary logics, the conceptual bases that lay for the corporate form as a general organizational solution, and that find in the theories called Public Choice (17-18) and “New Public Management” (19) the rational that led to its adoption in health care.

The cited works identify the role to be assigned to *knowledge* and its carriers as a critical element for organizational planning in health care. This has led to the need to develop a second interpretation of the observed phenomenon by carrying out a recognition of the theories (5-7) which analyze its role in the current situation through the categories of:

- “*knowledge-based economy*” suggests that socially produced and maintained

knowledge in education, health, research and development systems, has now become central in qualitative and quantitative corporate development;

- “*cognitive capitalism*” as a set of devices finalized at capturing the value produced in the knowledge-based economy;

- “*cognitive work*” as a social force representing the predominant fraction of “living work”⁴ and produces, through its social practices of common knowledge management, conflict and innovation central to social development. In this interpretation, the power of knowledge, exercised by doctors and health workers in the professional organizations investigated by Mintzberg, differs from professionalism and provides prefiguration of the organizational and functional modalities preferred in productive contexts with high density of knowledge, thus becoming, in this sense, a laboratory for the understanding of the dynamics of knowledge-based economy and cognitive work.

On this basis, objective 1 and 2d were investigated and the areas of problems emerging from objectives 2a, 2b, and 2c, were defined.

Concerning the legitimate purposes of the SSN, Article 32 of the Italian Constitution⁵, Article 1 of Law 833/786 and Articles 1, 2 and 3 of Legislative Decree 502/927, were considered as references.

⁴ Since the value is the amount of work spent on production (as rightly highlighted by A. Smith and D. Ricardo), goods are worth the ‘dead labor’ (which previously produced the means of production) and the ‘living labor’ delivered to the present by the workforce. This living work is furtherly divided into ‘necessary work’, which is the value of the goods bought via wage, and into ‘surplus labor’, which, made monetarily on the market, constitutes the profit (http://www.treccani.it/enciclopedia/teoria-marxista_%28Dizionario-di-Economia-e-Finanza%29/)

⁵ “The Republic protects health as fundamental right of the individual and interest of the community...”

⁶ the Republic protects health as fundamental right of the individual and interest of the community through the national health service.... the National Health Service consists of all the functions, structures, services and activities intended for promotion, maintenance and recovery of the physical and mental health of the whole population, without distinction of individual nor social conditions, and in ways that ensure the equality of citizens within the service...”

⁷ “1. The protection of health as fundamental right of the individual and interest of the community is guaranteed, with respect for the dignity and freedom of the person, through the National Health Service, complex of functions and assistance activities of regional health services and of other functions and activities carried out by national institutions, within the framework of the contributions provided by the Legislative Decree no. 31 March 1998, n. 112, as well as the functions of the State by the same decree. 2. The National Health Service ensures, through public resources and in accordance with the principles and objectives set out in articles 1 and 2 of the law of December 23, 1978, n. 833, the essential and uniform levels of care defined by the national health plan, in accordance with the principles of human dignity, necessity of health, equality in access to care, quality of care and its appropriateness regarding specific needs, as well as the cost-effectiveness in the use of resources. 3. The identification of the essential and uniform levels of care provided by the National Health Service, for the period of validity of the national health Plan, is carried out together with the identification of financial resources for the National Health Service, according to the financial compatibility defined for the entire public finance system in the economic and financial programming Document. The health services included

Results

From the etymological point of view, the term Organization (O.) derives from the Greek term “organon” which means tool/medium. This matrix has long influenced its semantics, in favor of definitions based on purposeful mechanistic approaches. Of course, the concept of O. is also socially determined, and we presently have varying definitions, each affected by the social environment and the historical moment in which it was coined. Thus, in classical theory (20), the O. can be understood as a tool for achieving goals in a *proprietary* logic (rational system that works as efficiently as possible), while in terms of systemic approach, the O. is defined as a system of elements linked via interdependency relations, within processes purposely oriented to the achievement of an objective (21-22). For constructivists (23), the O. is a temporary coalition of people trying together to carry out their activity, to satisfy their needs and at the same time to contribute to the functioning of the O.. Moreover, in a structuralist perspective (13) the O. becomes a social unit (or human grouping) deliberately constructed and reconstructed for the attainment of specific purposes. Now, this multiplicity of definitions is reflected by the existence of numerous theoretical approaches, here recalled to clarify that there are several organizational approaches whose appropriateness within specific contexts must be verified, beyond fideistic or ideological adherence to this or that model, bearing in mind that the choice of a specific approach should take into account both the knowledge of general theoretical elements and the use of available sociological evidence.

1) Main parameters of organizational design in health care and explicit aims of the bases theories that justify the corporatization of health care

For our discussion, particularly relevant is the *situational approach* established from the researches carried out in the second half of the last century by several authors (24-26), according to which the success of organizations depends on the relationship between the task of the O. and the environment in which it operates; therefore, there is no organizational model valid in every situation, but rather the possibility of attaining an effective O. depending on the ability to achieve some sort of balance and form of harmonization between strategy, structure, technology, the needs and aspirations of employees, and the external environment. The revolutionary characteristic of this attempt is the effort to define at each level what are considered to be the conditions for an effective organizational design; in other words, the consistency between organizational variables and situational factors, so as to provide a material basis for the concept of organizational appropriateness.

in the essential levels of care are guaranteed by the National Health Service free of charge or with an expenditure participation fee (co-pay) in the forms and modalities presented by the law in force.”

Mintzerbg has developed the situational analysis (15) by defining five different types of O., starting from the complex of the modalities dividing labor into separate tasks, thus carrying out the coordination between these tasks and deepening the specific features of professional organizations (healthcare, teaching of different order and degree, research and development), which are characterized by the presence, within the operating core, of professionals adequately trained and “socialized” to carry out tasks in which the standardization and maintenance of knowledge and skills is the main parameter of planning, while the standardization of both processes and outcomes gives rise to dysfunctional responses.

The situational approach therefore involves a vision of organizational variables as a set of formal and informal elements, to be considered unitarily in any process of organizational analysis and in the experiences of design and redesign. These theories, operating in the field of organizational development, have contributed to operationalizing the intuitions of the situational and systemic approach, developing “diagnostic” and “prescriptive” models to identify and subsequently remedy organizational problems, which revolve around 5 central questions concerning the organization/environment relationships:

- 1) **of what nature is the O. environment?** Simple and stable or complex and turbulent? Are there any changes in the economic, technological sectors, in the market, between trade union relations and at socio-political level?
- 2) **What is the applied strategy?** Is the O. lacking strategy and is it limited to reacting to any changes that may arise? Does O. systematically analyze the environment to discover new threats and opportunities? Does it adopt an innovative and active attitude? Is the attitude toward the environment competitive or collaborative?
- 3) **What type of technology (mechanistic or non-mechanistic) is applied?** Are the processes used to transform inputs into outputs standardized and routinized? The technology used allows for tasks characterized by extended or limited areas of responsibility and autonomy?
- 4) **What are the characteristics of the employees and what are the “culture” and dominant ethics in the O.?** Do employees in the operational core have to perform simple tasks or face issues that require discretion and professional autonomy? What attitude do they adopt at work? What are the fundamental values and beliefs conforming corporate culture models? Are organizations informal or confidential?
- 5) **What is the structure of O. and what are its prevailing directional styles?** Is the organization bureaucratic? Is the predominant style of direction authoritarian and based on close control, or does it encourage innovative initiatives, the spirit of enterprise and collaboration between working groups?

These questions are based on the assumption that the O. consists of interrelated

subsystems of a strategic, human, technological, structural and managerial nature, which must result coherent with each other and adapted to the environmental conditions (11).

Based on the observations of Mintzerbg on professional O.s, in addition to other authors who have investigated the material bases of professional autonomy (27-28), the focus seems to shift on the appropriate organizational parameters for health care and its operational subsystems, in the form of a grid, in order to train Hygienic residents in organizational diagnosis (Tab. 1).

<i>Variable under examination</i>	<i>Scale of detection and its attributed value</i>		
1) Capacity to ensure the transition from sick to healthy	low	medium	high
2) Degree of freedom socially recognised by the principle of discipline	low	medium	high
3) Professional autonomy resulting from the evolution of the epidemiological framework	low	medium	high
4) Autonomy in producing guidelines for professional activities	low	medium	high
5) Possibility of procedurisation of the activity	low	medium	high
6) Possibility of direct supervision by the manager	low	medium	high
7) Possibility of standardisation by analysts	low	medium	high
8) Possibility of functional drift (substitution of legitimate aims)	low	medium	high
9) Possibility of organisational drift (use of O for extra-organisational interests).	low	medium	high
10) Anything else?			

* Elaboration on texts by Mintzberg (15,16.) for the course of Governance at the School of Specialisation in Hygiene, Public Health and Epidemiology, Faculty of Medicine, University of Perugia.

Tab. 1: Grid for the analysis of the presence, in specific organisational levels of the NHS, of the variables identified by the sociology of professional organisations as parameters for organisational design*.

Application to Department/Service

1b) Theoretical basis regarding the adoption of the company form in health care

The “rational” models, better known as the classical Theory of the O., O. Labor Science or Scientific Management, represent the first organic model of organizational theory particularly appreciated and applied in situations where the strategy is centered on *proprietary needs and logics*. They are strongly connotated by a mechanistic conception of the world and by a theory of motivation stating that “man is only moved by fear of misery and the desire for greater earnings” (20); therefore, workers will render to the limit of their physical capacities, if paid exactly proportionally to their effort. As for the operative subsystems: a) the specific technical systems (mediating the central activity of the O.) are based on the parcelling of the task (the more a working process is divided into its simplest components, the more the worker

can become specialized and expert in carrying out it (29); b) the rewarding system is based on money, recompense is determined exclusively by the carried out activity, without taking into account other factors (seniority as proxy of competence, etc.); c) staff management foresees salaries on the shortest time scale possible; d) the control system measures individual productivity.

The classic theory of O. has been, and still is, applied in the goods production in the industry - as in the Ford car factories of the first post-war period in the USA - and has characterized the so-called Fordism, in which profit maximization, through economies of scale and strict control over producers, occurred within nation states, while wage policies made it possible to consume the mass goods produced.

When the post-World War II expansion of public services reached conspicuous proportions, driven by workers' struggles and request for appropriate responses to their social needs, James Buchanan (18) and Gordon Tullock⁸(17), two classical theory economists embodying the uniformity of human behavior both in private and public O., began to argue the necessity to homogenize the theory and practice of the functioning of the state and the market. According to these authors, the problem was preventing "bureaucracy" (officials and operators of various public services) from maximizing its personal interest, for the bureaucrat would not work for the general interest nor to respond to social needs, but to increase the credit of their office and the number of subordinates, or, to rise into hierarchy, causing the supply to swell, and subsequently, an impulsive expansion of the demand. These authors seem to suggest a sort of great alliance between bureaucratic officials and middle-class members, who use public services most of all, with an irrational increase in staff numbers and the expansion of public spending (17, 30).

This has given way to a vast reorganization of administrations aimed at "starving the beast". In 1991, Christopher Hood (30) gave the name of New Public Management to this process of transformation of public institutions systematically inspired by the logic of competition and the entrepreneurial methods used in private enterprises: "competition, downsizing, outsourcing, auditing, regulation through specialized agencies, individualization of compensation, staff flexibility, decentralization of profit centers, performance indicators, and benchmarking are tools to adapt the public sector to the reality of the market and globalization" (30). Management techniques, following

⁸ Buchanan and Tullock are the main theorists of the School of Public Choice, whose historic center is the University of Virginia in Charlottesville, has produced an analysis of public services by taking an interest not in the nature of the goods produced, but in the way in which they are produced. James Buchanan in his "the limits of Freedom" (18) advocates the suppression of the welfare state and its replacement by a new social contract, in which the rich would pay financial compensation to the poor in exchange for the benefits they had suppressed.

proprietary logic, are based on objectives and resources assigned to executives and workers so that the performance evaluation weighs the alignment with the company strategy and the subjugation to its values, and the rewarding/sanctioning system aims to reward the obedient employees and punish those who are non-performant and not subjugated; within the corporatized public, similarly to private industries, proprietary logics do not include significant roles for participation, while corporate networks emphasize customer satisfaction following the received performance. This way, “the bureaucrats” of the public - the beast - are subjected to the same conditions as the wage worker in the private sector, and the logic of competition pervades both welfare institutions as well as the action of the State itself, which in turn competes with others worldwide.

2) Analyzing the functionality of business logic in reaching the legitimate goals of the National Health Service in relation to defined emerging issues

In summary, we can say that the corporatization of the SSN has been depicted as the introduction of proprietary logics in the SSN in order to increase its efficiency, subsequently handing over health care companies to public managers - the regions - identified as administrative levels capable, compared to the municipalities that had managed local health units, of avoiding incongruous uses and substitution of ends, while financial economic programming (DPEF and financial laws) on the one hand and sector programming (national and regional health Plan) on the other hand, should have ensured adequate policies and resources, and their use in appropriate frameworks consistent with the institutional aims of the SSN, by governing the excessive variability of specific regional policies and ensuring equal access to a basic package of services of known effectiveness (Essential Levels of Assistance).

Beyond the narrative, lacking the assumptions and explicit aims of the previously mentioned theorists of Public Choice and New Public Management, our SSN has been exposed since 1978, its year of birth, to a dual management line, designed to distinguish it, on the one hand, from the programmatic inputs envisioned on the formal level - the first PSN will only be officialized in 1992 with the signature of prisoner Minister De Lorenzo – and, on the other hand, to subject it to a progressive and immobilizing restriction of financial resources and personnel⁹.

⁹ In 1984 began the “economic maneuver in health care” with the separation/severance, by the Craxi Government, of social and mental health expenses, maneuver whose financial laws have since then deepened and developed brought and levels of application, thus extending it up to our days and carefully disarticulating the financial resources of the SSN. Among numerous measures, emphasized are the cuts taking over the National Health Fund, the elimination of the share in capital for structural investments, innovations and maintenance; the introduction of tickets that have created, maintained and expanded convenience niche in the private sector; the outsourcing of the support functions (canteens

Considering that political choices of a defined administrative level have, among other impacts, the function of “effect modifier” of health determinants, enhancing or reducing their consequences on the health conditions of the population resident in the area where these policies have effective application (2), the combination of the introduction of proprietary logics into health care, the approval of federalism in health care with the V Reform of the Constitution, and the multiannual economic maneuver in health care managed by the precursors of the present Ministry of Economy and Finance, had the overall effect of disarticulating the action of our SSN, thus creating 21 regional health services with a general weakening of the functions of prevention and assistance, with a capacity to adequate response to emerging health problems in different contexts. Let us analyze some concrete examples.

2a) Variations within the epidemiological framework

Infectivologists and virologists’ reports regarding the possibility of emergence in the short-medium term of new zoonoses (32) did not affect the belief in the substantial long-term centrality of chronic degenerative diseases as a parameter for the design of health services: the occurrences of the HIV epidemic, at the end of the 20th century, and the emergence of SARS, MERS and Ebola epidemics at the beginning of the 21st century, although representing the tip of the iceberg of about 200 new emerging infectious diseases, has not led our national programming to take on the complexity of epidemiological scenarios, nor has it seen to prepare plans for the upcoming new pandemic and epidemic scenarios (33-34); moreover, regionalized health has continued in certain important regions to accentuate territorial weakening, reserving investment mainly for the hospital function alone, or for the development of the

and kitchens, laundry, warehouse, etc.); the outsourcing of important prevention quotas (e.g.: health in factories discouraging workers toward the SSN, to which they had greatly contributed), territorial health care/assistance (e.g. dental health, home care, instrumental and laboratory diagnostics, specialized outpatient care), hospital health care/assistance (regarding the sections related to elective interventions) and most of rehabilitation. Besides the financial cuts, the interventions on cognitive workers in health care with long-term turnover blocks have been devastating, mostly weakening territorial services, the stability of new employees, and the introduction of the limited entrance number for the Faculties of Medicine. These policies have represented the lowest common denominator of all the financial laws approved since 1984; moreover, they find ensuing applications in the other few States possessing an SSN, voicing a supranational occult programming designed to disarticulate health services applied by national government sectors.

In Italy, in recent years, the weakening of the SSN has created room for policies of both explicit fragmentation of the SSN, such as the removal of the national plan of prevention and the marginalization of general medicine, as well as the explicit allocation of assistance quotas to private individuals through the creation of the so-called second pillar, while the third pillar, resoundingly union-supported, aims to provide “additional” benefits through “supplementary” funds (31).

private sector. In this context, the Covid 19 pandemic has functioned as a litmus test: the available data mainly reports **strong spatial inequalities in the infection and mortality rates**: Lombardy, presenting all the variables that epidemiological studies have so far identified as determinants of the disease by Covid 19 (35) has, as of May 15, 2020:

1. a cumulative rate of infection of 8,3 per 1.000 residents compared to an average Italian value of 3, 7, 12 times higher than the Italian region with fewer cases, Basilicata, where there have been 0,7 cases per thousand residents up to that date;
2. a cumulative mortality rate of 155/100.000, three times the Italian one (55 out of 100.000) and 32 times higher than that of Basilicata, equal to 4,5 out of 100.000.

These inequalities confirm the role of effect modifiers by variables such as:

- a. the health policies concretely pursued over the years by the national and regional governments, which have in turn conditioned the concrete response given to the pandemic: when comparing the data recorded by OMS database (36) as of May 15, 2020 for two countries that have an SSN inclusive of proprietary logics, such as Italy and Great Britain, with those of the People's Republic of China and South Korea, we observe cumulative contagion rates from 17 to 60 times higher, and cumulative mortality rates that are between 102 and 154 times higher in the former: the exposure to risk and damage in the Covid-19 pandemic, more likely for economically disadvantaged people (37, 38), shows significant effect variations depending on the policy adopted by the government of the state/region in which one resides;
- b. the *“political response of the administrative level”* variable also includes the quality of the *preventive* and distinctly *welfare* setting offered to infected and sick people, strongly conditioning taking charge, the seriousness of the clinical course and the probability of dying for all citizens, even more so for the economically disadvantaged, while delays in the providing health workers with adequate personal protection devices have led to significant rates of infection and mortality, highlighting the inadequacy of the hospital segment in dealing with the pandemic and, more generally, the subordination of corporate management and corporate prevention services to the inappropriate inputs of regional governments.

2b) Inequalities in health care and access to health services

Numerous reports by global, European, and national public agencies (2, 39-40) document the rise in inequality at the global level and, given its already-mentioned role of cause of causes, inequality regarding risk exposure, health and access to health services.

In Italy, ISTAT (41-42) records a difference in healthy years of life between regions,

with delta of more than 17 years among those with worst data (e.g.: Calabria) and those with best data (e.g.: Bolzano) with a clear gradient linked to income, socio-cultural levels and geographical location.

This data would indicate the failure of national equalization policies were it not for the chronic lack of PSN, the understanding of prevention plans, and the decisions of the Conference of State Regions, attesting that the problem is not perceived as a priority, for not only does it not spur effective equalization policies, it also drives demands for differentiated autonomy from the economically stronger regions, which want to achieve greater control over the taxes paid in their respective territories by subtracting resources from the rebalancing of the system.

2c) Contrasting corruption and confidential associations

In 1918, Charles Bettelheim was warning the newly-born USSR of the problems that, even in a context of socialist management, could arise from the fact that the possession of goods by specific apparatuses and officials could give rise to phenomena of substantial appropriation, distracting them from social uses, thus reproducing new classes and new forms of class conflict (43). The problem originated in-depth discussions and tough political battles aimed at keeping active the chain of meaning between the formal belonging of goods and their substantial use for social needs. In capitalist states, it is the force exerted by subclasses, securing income and responding to social needs, that has imposed the development of welfare and the establishment of national health services, and has modulated, through various historical phases, the private use of the public: during Fordism, the nation state represented a favorable environment for public control over institutions by reducing the scope of privatization processes; in post-Fordism, neoliberal globalization has redirected these conditions in favor of capital owners, and ubiquitously introduced proprietary logics, explicitly aimed at optimizing the growing shares of capital even in public welfare sectors. In particular, health care is assaulted on several levels, as testified by countless acts by both parliamentary committees (44) and accounting judiciary¹⁰: focusing on pharmaceutical assistance alone - though the same logic applies to procurement sector, purchases of goods and services, authorization and accreditation processes, and so on - the assault on common resources by pharmaceutical multinationals is wide and articulated, and goes from disease mongering to the corruption of officials

¹⁰ According to the second paragraph of Article 100 of the Constitution, the Court of Audit is required to exercise prior control of legitimacy over the acts of the Government, and the subsequent one regarding the management of the state budget; in addition, it participates in inspecting the financial management of Entities receiving ordinary state contributions, reporting directly on the outcome of the check performed, thus favoring a rich production of acts, reports, and records www.corteconti.it

of various state, regional, and corporal administrative levels, to the point of involving significant percentages of hospital doctors, mmg (Doctors of General Medicine), pls (Pediatricians of Free Choice) and pharmacists, sometimes massively represented as happens in Sicily and other regions in private associations (44). If, in the face of corruption, one can always argue that “evil” comes from outside health care forces that manage, in various ways, to prioritize the extra-organizational interests over the legitimate ones of the SSN, considerable concern is raised by cases where corruption is exercised by the political and administrative levels tasked with the institutional function of combating it. With increasing frequency in the last decade, the SSN shows the growth of processes of institutional corruption, in which the “regional administration - corporate management - staff apparatuses and administrative offices” complex produces a management of public services consistent with the extra-organizational interests: Lombardy, Calabria, Basilicata, and Umbria are an approximate list of systemic corrupting processes, in which regional and corporate officials, engaged in strategic management activities, were caught collaborating with specific types of private use of the public approved by regional political leaders of the various SSRs. In Umbria, it has reached the point where the investigating magistrates had to detect the crime of “criminal association”, given the cohesive behavior of regional, general, health and administrative councils, in addition to staff and corporate administrative offices of AOPG, in applying extra-organizational political input from Regional Council, freemasonry, curia and trade unions. If everyone results certainly innocent until convicted in Cassation, the matter has to be examined under the specific assumption made in the article, that is, evaluating the role of proprietary logics constituting the company as a condition without which the criminal association could not have been constituted, nor would have been able to impose its command line on an organization with different purposes approving business plans consistent with the national transparency regulations.

This also proved possible because over time, thanks to the proprietary logics regulating the functioning of health care companies, a ruling class was selected based on the principle of obedience, chosen to hegemonize its operation at the expense of both the principles of competence and ethics, in order to render public management proprietary, bending it to a complicated management of various types of extra-organizational interests.

The issue at hand results relevant and consistent, for the simple substitution of the political color of the forces administering the Region could not give sufficient guarantees to produce the necessary realignment between administrative action and institutional purposes.

Essentially, the proprietary logics applied improperly in health care, as documented

by the sociological evidence briefly mentioned in previous sections, produce significant substitutions of the purposes, documented by abundant and substantial cases of sentinel events, also definable as cases of avoidable corruption, which reinforce a careful reorganization of the company form according to the parameters of organizational design.

2d) Interaction with knowledge-intensive services and operators

In the SSN prevails a section of organization, called professional, tasked with applying clinical knowledge and skills under conditions of wide discretion regarding the use of resources, given the substantial uncertainty surrounding two central processes of cognitive work in health care: diagnosis and therapy (27). Professional autonomy (meaning: “assigning one’s laws oneself”) is a privilege that society grants to professionals who possess clinical knowledge and skills capable of re/giving health, who can guarantee the transition from sick status to a healthy one, which represents both the material basis of the power of knowledge (28) as well as deficiencies in bureaucratic power, thus creating a substantial imbalance of power for the benefit of cognitive work.

We could periodize the interaction between cognitive work and proprietary business logic in:

- a first phase (the first ten years since the 1992 reform) examined eventual benefits effectively caused by the programming and control systems (the budget), tariff payment systems, and from the managerial function - all graduates had been reduced to managerial roles – discovering, within the daily work field, underlying rhetorics and substantial limits;
- a second phase - from the beginning of 2000 until the global financial crisis of 2008 - whose cognitive work has tried to transform the proprietary governance of ASL and AO into clinical governance aimed at improving assistance quality (45) on the levels of effectiveness, appropriateness, safety, fairness in access to care, efficiency, and user involvement, all difficult to achieve through the exercise of administrative power along hierarchical lines; appropriate operational tools for cognitive work have been proposed and put into practice (problem approach, clinical and evaluative epidemiology, scientific method enhancement, financing systems in which “health pays” -global budget, capital share,...- clinical audits, peer reviews, Evidence Based Medicine, transparency on conflicts of interest, continuing education of doctors and other health workers, shared evaluation of outcomes between workers and users, etc.), colliding with regional and corporate directions placed in the hands of officials by federalism, often expressed by territorial clans selected on the principle of obedience, while governance needed, in order to develop, coordination capacity strongly based on the principle of competence (46);

- a third stage, in which austerity programs, forced to settle public debts looted to support banks and financial markets in the 2008 crisis, closed spaces for governance and imposed a proprietary governance that produced drastic cuts in financial resources, health personnel and facilities, impoverishment of territorial assistance, emphasis on behavioral risk factors, development of the private sector, etc. that have created those effect modifications for which the pandemic was able to cause world records damage, right in the territorial contexts advocating and applying proprietary logics in health care.

The demand for cognitive work to change corporate governance in clinical governance has been addressed by proprietary logics supporters (bipartisan governments, corporate management schools, technicians obeying regional and corporate management...):

a) on the one hand, by rewarding the share of profession more attentive to utilitarian behavior by granting ample space for the private use of the public, of which free profession is clear expression;

b) on the other hand, the following have been implemented:

b.1) a whole series of measures aimed at producing control over cognitive work by attempting “to use direct supervision, standardization of work processes or standardization of outputs.

The insertion of intermediate levels of direct supervision derives from the hypothesis that professional activity can be controlled, like any other activity, in a top-down way, a hypothesis that has repeatedly proved wrong. Forms of standardization other than standardization of skills, rather than allowing for control of professional activity, often discourage and hinder professionals: complex work processes cannot be formalized through rules and norms, and vague and indeterminate outputs cannot be standardized through programming and control systems without misleading effects.

By programming incorrect behaviors and measuring wrong outputs, professionals are forced to play the game of mechanical bureaucracy; to meet standards instead of serving citizens, by operating within a medium-goal reversal. While rationalization makes low-cost output available to customers in mechanical bureaucracy, in professional activities it spurs ineffective and impersonal services” (15).

b.2) attempts to reify knowledge and capture professional knowledge through artificial intelligence. Knowledge can be reified when:

- cognitive processes can be transformed into procedures, which, in turn, can occur when the skills founded by knowledge are the fruit of elementary cognitive functions proper to convergent thinking (memory, calculation, deduction...) and

useful for dealing with *known* problems, yet not when higher cognitive functions of divergent thinking are involved (induction, creativity, imagination, etc.), the latter useful when dealing with *new* problems;

- there is a clear correspondence between a given contingency and a given procedure: part of the conditions leading to chronic degenerative diseases (type 2 diabetes, hypertension, hyperlipidemia, etc.) could fall into this condition, while the complexation of the epidemiological structure, referred to in the introduction, invalidates it;
 - the object to which the procedure applies does not have any symbolic value;
- b.3)** long term planning through the limited entrance number in the Faculties of Medicine thus the pruning of professional roles, otherwise leaving unexplainable the organized ineptitude with which it was chosen to do nothing in the face of the aging of the prevailing share of professionals active in the SSN, already evident at the end of the century, when its demographic data were examined: the twenty-year turn-over blocks, derived from the non-explicit programming of all bipartisan governments over the last 20 years, are only understandable from a perspective of disarticulation of the power of knowledge.
- b.4)** by increasing the swelling presence of precarious staff, who, by renewing their precarious status, has been forced to work in conditions of organizational marginalization, existential insecurity, compression of real and deferred remuneration; the norms that followed over the years have insisted in consolidating, within the cognitive precariat of health care, the conviction that its presence was inessential for the SSN - or marginal at best, thus negatively affecting its guidelines concerning the deepening of professional backgrounds: it would make little sense to maintain and deepen one's clinical knowledge and skills if the probability of continuing to practice one's career is low or, in any case, full of uncertainty.
- b.5)** Universities, research, and in-service training have in turn been subjected to the torsions that policies serving neoliberalism have imposed on the entire public administration: new knowledge is fenced off by the emergence of "service providers" (Wiley, Elsevier, etc.) who appropriate themselves of works, merit of the scientific method, and impose artificial ledges to freely access such information; the drive to patent scientific discoveries has sought to pass them on as fruit of individual knowledge, when none of us would be able to learn language without social interaction, let alone add a further constituent to the enormous accumulated social knowledge; in general, resources are becoming increasingly scarce and allocated outside a time frame that allows for strategic investments planned in some sensible direction, hence making the researcher's

life increasingly difficult, considering the existent precarious employment condition as well as the meager low income. When all this happens in university polyclinics, the socialization of future professionals takes place in a context in which it is the “non-norms” of utilitarian behavior giving meaning to professional action, thus dissipating the cognitive patrimony acquired in long years of training, as well as creating deep dissonances with the conditions that in the past have led to the delicate balance on which the social recognition of professional autonomy has been built; all aggravated by the caste filters that regulate access to the university.

Overall, there was a planned and multi-level divestment in cognitive work in health care, intentionally creating dysfunctional conditions for the maintenance and development of knowledge and skills, amplifying schizophrenia among the official purposes of the SSN, trends inherent in its nature as a professional organization with a high density of cognitive work and business management.

Discussion and conclusions

The term “crisis” comes from the Greek crisis, meaning separation, choice, judgment, which in turn derives from the verb *crinein*, which means to judge. The Covid 19 pandemic, amplified by defined government policies based on proprietary logics in society and health care, has put before our eyes the need to judge the holders of these logics.

The conducted analysis showed the legitimacy of a discourse concerning the crisis of the company form in health, inasmuch:

- the parameters of organizational planning in health care underwrites the need to rethink the organization of our SSN and welfare, since we are in the presence of a complexation of the operational scenarios to manage the pandemic and the associated global environmental disorder;
- the pandemic must be effectively faced with proactive territorial policies of tracking and non-pharmacological intervention (47), while the centralized hospital functions, targeted by the model of university hospital of DM 70 and the hypertrophy of the hospital field characterizing certain regional policies, must be re-thought in depth;
- the pronounced health differential between north and south highlights the limitations of regionalized health care, which plasters inequalities in health care and access to effective services for both chronic degenerative and infectious diseases, as indicated by the substantial and unacceptable spatial differences between regions, and calls, on the one hand, for strong equalization action by the central state, and, on the other hand, for the responsibility of local communities, which must be able

to participate in the management of services in order to highlight real health and care problems;

- inequalities in involuntary risk exposure require a strong role for territories in primary prevention policies concerning collective risk factors, as well as primary prevention models capable of protecting air, water and soil matrices from risk producers (4);
- the ethical contribution of the SSN shows how the proprietary logics operate in the corporate strategy and transform the O. into a weapon serving few territorial clans, which in turn use it to favor extra-organizational interests both heterogeneous and dysfunctional for the general interest: the politician's recommended x, the contract to the firm managed by y's wife, the convention with clinic managed by the adept of the Masonic lodge z...;

The elephant in the room results, therefore, the inappropriateness of business models centered on proprietary logics in managing welfare, research, and development systems.

Since all this takes place around a social process called "knowledge", for the absence of society implies lack knowledge, and since AA have argued that knowledge is a common good (48), it should be remembered that:

- if in general common goods are understood as "goods which are property of a community and of which the community can freely dispose" (commons of the Anglo-Saxon juridical tradition), Hess and Ostrom¹¹ provide a more problematic definition, identifying a common good as: "a resource shared by a group of people and subjected to social dilemmas (i.e. inquiries, controversies, doubts, disputes, etc.)"; for these authors, "a common good is free from values: its outcome may be good or bad, sustainable or not, and to ensure lasting and stable systems we need clarity, good decision-making capabilities and collaborative management strategies";
- in the case of "subtractable" resources, such as fishing grounds, the use by one person reduces the benefits available to others, so much so that high subtractability is generally a basic feature of the common "natural" resources;
- almost all ramifications of knowledge, on the contrary, are relatively non-subtractable. On the contrary, the value of a resource is directly proportional to the amount of people using the resource and joining the community of users: we therefore speak of "cornucopia of common goods": the value of scientific literature or open source software actually increases as the number of people participating in the enterprise increases, a phenomenon defined by economists as "network effect"; when knowledge is coordinated as a common good, the efficiency of sharing

¹¹ Elinor Ostrom received the Nobel Prize for Economics in 2009.

is greater than that of competition.

- Hardin (49) argues that “failure is the inevitable fate of all those who pursue their own interest in a society that professes free access to common resources. It is a freedom heralding general disaster.” While this thesis is known as the “tragedy” of common goods, Ostrom and Hess retorted that, while the Hardin model often proves applicable in situations, it is also true that many groups, local communities or professional associations, have proved able to effectively manage and support common resources, provided that appropriate conditions are available: appropriate rules, effective conflict resolution mechanisms, defined limits of use, guaranteed by third parties.

To these qualitative statements are added the already-mentioned analyses developed by some critics of the political economy for which, in summary, the knowledge-based economy has undoubtedly developed in the last 50 years within health care, education, and research and development sectors (5) which, linked to welfare systems, take on a biopolitical role, where cognitive work producing knowledge for life clashes with power structures (biopower) seeking to profit from such productions by imposing proprietary logics. The increasing centrality of knowledge economy is influential enough to change the type of configuration of capitalist society, leading it to become cognitive biocapitalism (7).

During Fordism, the social production and reproduction of knowledge originated organizational typologies affected, within their functioning, by the particular nature of knowledge as a nondeductible common good, where sharing, rather competing, creates development and well-being, producing advantages primarily for professionals, as well as a whole range of operating systems that are completely heterogeneous from those used in the manufacturing of material goods. Following Fordism, the development of knowledge economy has prompted biopower to try to impose control and value of this economy through proprietary logics that have not been able to subjugate the social practices of professionalism: in the new conditions of this phase, professionalism has merged into living cognitive work, battling biopower repeatedly expressed:

- in the dispute concerning neoliberal governance, where living cognitive work has requested and practiced clinical governance when facing specific counterproductivity in the economy of knowledge by corporate governance, as well as its dysfunctional proprietary logics;
- the richness of the operational instrumentation put into place by the cognitive living work is impressive in terms of concreteness and superiority in allowing the use and development of knowledge with respect to proprietary devices: problem approach, clinical and evaluative epidemiology, scientific method enhancement,

health promotion, financing systems in which “health pays” -global budget, capital share - clinical audits, peer reviews, evidence based medicine, transparency on conflicts of interest, continuous education of doctors and other health workers, shared evaluation of outcomes between workers and users, etc., represent a partial list of the powerful operational tools implemented by cognitive work in order to continue to develop the knowledge economy, bringing out the disconcerting shortage within proprietary operating systems: in the much-vaunted “management by objective” alone, problems are subtracted from the collective discussion because selected by owners, nailing the workers to achieve objectives assigned to them by others, easily recognizable, once unmasked the rhetoric front, as owners messing proposals in areas where proprietary logics produce enormous damage to health and knowledge, as shown by the Covid 19 pandemic.

The risk conditions produced by the pandemic have highlighted the divergent interests between population and cognitive workers, who demand centralization of everyone’s health, exploiting for this cause tools intended for the common management of knowledge and proprietary logics of biopower, which, in turn, aspire to impose continuity in the production processes of cognitive biocapitalism, though left without arguments, crushed by unsustainable negationist positions, in the impossibility of silencing and firing all the cognitive workers of the world; a contradiction well exemplified in the clash between evidence and ignorance mass mediated through the figures of Dr. Antony Fauci¹² and OMS on one side, and US supremacy administration on the other.

In summary, living cognitive work in knowledge economy, contrary to biopower, is engaged in breaking the disjunction between power and experience (50) that characterized the neoliberal thirty-year period. If the production of knowledge is a process universally recognized as social, it emerges that in the economy of knowledge the power of living cognitive work is breaching, unexpectedly and concretely, in true subsumption¹³, even spurring management methods superior to corporate proprietary logics, since deemed more appropriate for the social development of the cornucopia of the commons knowledge. This conflict is unfolding now, under our very eyes:

- in Italy, the breaking of the real subsumption and/or the disjunction between power and experience has been expressed in the capacity of the multitude to favor health over economy, a demand for which cognitive work has offered and keeps

¹² Anthony Stephen Fauci is an American immunologist who has remarkably contributed to the field of AIDS research and other immunodeficiencies, both as a scientist and as head of the US National Institute of Allergy and Infectious Diseases.

¹³ Marx defines real subsumption of labor to capital as determination of the very way of being of work by the capitalist social relationship that incorporates it.

offering substantial contribution;

- the political heart of Anglo-Saxon elites, the US Republican Party, is committed to trying to impose organized ineptitude in the management of the Covid 19 pandemic, arguing that the sacrifice of the weakest is a worthy price to maintain the economic system funding their unmeasured wealth;
- around the world, seven billion seven hundred million people are waiting for an effective vaccine and/or treatment to be made available to all, meaning that they want to benefit from the fruits of the common good knowledge.

In conclusion, we can remark that, if presently faced with overwhelming scenarios such as the growing inappropriate management of the pandemic, the environmental climate crisis, and the economic crisis deriving by breaking the long lines of globalized production, the biopolitical energies, that unite under the SSN the struggles for the right to health and cognitive work, are precious to supply flesh and blood to the possibility of finally expelling proprietary logics from our SSN, and not only.

If corporatization represented the poorly failed attempt to impose these logics aimed at rendering diseases and health capitalist, cognitive biocapitalism produces with increasing difficulty command and capture of the knowledge produced by cognitive work. It is therefore possible to experiment with corporate and organizational models suitable for knowledge economy and able to guarantee adequate development to the enormous existent social knowledge. Entrusting to the peace of the archives the models of proprietary organizations yearned by the New Public Management.

References

3. Piketty T. *Le capital au 21e siècle*. Paris: Editions du Seuil; 2016, pp 946.
4. Marmot M. *La salute diseguale. La sfida di un mondo ingiusto*. Roma: Il Pensiero Scientifico Editore; 2016, pp 233.
5. Omran A. "The epidemiological transition: A theory of the epidemiology of population change" (PDF). *The Milbank Quarterly* 2005; 83 (4): 731–57, doi:10.1111/j.1468-0009.2005.00398.x.
6. Romagnoli C, Neri F, Pala L. Dai danni alle esposizioni o dalle esposizioni ai danni? Una analisi di caso nel SIN Terni-Papigno. *Sistema Salute* 2019; 65,(1)2019: 11-40.
7. Vercellone C, Fumagalli A. *Le capitalismo cognitif. Apports et perspectives*, introduction, *European Journal of Economic and Social Systems* 2007; 20 (1) 7-14.
8. Vercellone C, Fumagalli A., Giuliani A. Lucarelli S. *Cognitive Capitalism, Welfare and Labour*. London: Routledge; 2019.
9. Fumagalli A. *Economia politica del comune. Sfruttamento e sussunzione nel capitalismo bio - cognitivo*. Roma: Derive e Approdi; 2017, pp 224.
10. Negri T, Hardt M. *Assemblea*. Firenze: Ponte alle Grazie; 2018, pp 439.
11. United Nations Development Group *A million voices: the world we want*. Published September 10, 2013. <http://www.ohchr.org/Documents/Issues/MDGs/UNDGAMillionVoices.pdf>. Accessed June 29, 2016.
12. Romagnoli C. (Promozione dell'equità nella salute ed irresponsabilità sociale delle elites. *Sistema sa-*

- lute, *La rivista Italiana di educazione sanitaria e promozione della salute* 2017; 61 (4): 12-38.
13. Morgan G. *Images. Le metafore dell'organizzazione*. Milano: Franco Angeli; 1995, pp 481.
 14. Bonazzi G. *Storia del pensiero organizzativo*. Milano: Franco Angeli; 2002, pp 512.
 15. Gross E, Etzioni A. *Organizzazioni e società*. Bologna: Il Mulino; 1996, pp 333.
 16. Drucker PF. *Manuale di management. Compiti, responsabilità, metodi*. Milano: Etas Libri, 2000; pp 862.
 17. Mintzberg H. *La progettazione dell'organizzazione aziendale*. Bologna: Il Mulino; 1996.
 18. Mintzberg H *Managers Not MBAs: A Hard Look at the Soft Practice of Managing and Management Development* Paperback, Oakland, CA :Berrett-Koehler Publishers; 2005, pp 314.
 19. Tullock G. *The politics of bureaucracy*. Washington: Public Affair Press; 1965.
 20. Buchanan J. *I limiti della libertà'. Tra anarchia e leviatano*. Sant'Arcangelo di Romagna: Rusconi; 1998, pp 250.
 21. Hood C. The "New Public Management" in the 1980s: Variations on a theme. *Accounting, organizations and society*; 1995: 20 (2-3), 93-109.
 22. Taylor F. *Principles of scientific management*. New York: Harper and Row; 1911.
 23. Bogdanov AA *Essays in Tektology* (1912). Trad ingl. *The systems Inquiry Series*: Seaside California Intersystem Publications; 1980.
 24. Kast E, Rosenzweig JE. *Contingency views of organization and management*. Chicago, Science Research Associates; 1973.
 25. Goffman E. *The presentation of self in everyday life* Garden City, NY: Double-day; 1959.
 26. Burns T, Stalker GM. *The management of innovation* London: Tavistock; 1961.
 27. Woodward J. *Industrial Organization: theory and practice*. London: Oxford University Press; 1965.
 28. Lawrence PR, Lorsch JW. *Differentiation and integration in complex organizations*. *Administrative Science Quarterly* 1967; 12:1-47.
 29. Jamous H, Pelouille B. *Professions or self perpetuating system; changes in the France university hospital system*. In Jackson J (ed) *Profession et professionalisation*. Cambridge: Cambridge University Press; 1970.
 30. Popitz H. *Fenomenologia del potere. Autorità, dominio, violenza, tecnica*. Bologna: Il Mulino; 2015, pp 212.
 31. Gulick L, Urwick L (eds) *Papers in the science of administration*. New York: Institute of Public Administration, Columbia University; 1937.
 32. Dardot P, Laval C. *La nuova ragione del mondo. Critica della razionalità neoliberista*. Roma: Derive e Approdi; 2013, pp 497.
 33. Donzelli A. *Sanità «integrativa» distorsiva di comportamenti medici e svantaggiosa anche per l'ambiente* Congresso Nazionale ISDE Italia Ecologia e prevenzione: non è troppo tardi per imparare a vivere meglio! Arezzo - sabato 6 aprile 2019.
 34. Madhav N et al . *Pandemics: Risks, Impacts, and Mitigation*. In: *Disease Control Priorities: Improving Health and Reducing Poverty*. 3rd edition. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2017 Nov. Chapter 17; 2017.
 35. Ferguson NA et al. *Impact of non pharmaceutical interventions to reduce Covid -19 mortality and health demand*. London: Imperial College Covid -19 Response Team; 2020 DOI" <https://doi.org/10.25561/77482>
 36. *Redefining vulnerability in the era of Covid 19* Lancet. 2020 Apr 4;395(10230):1089. doi: 10.1016/S0140-6736(20)30757-1.
 37. Buja et al. *Demographics and socio economics factors and resousce indicators associated with the rapid spread of COVID 19 in Northern Italy: an ecologiocal study*. Med Rdv preprint; 2020 : <https://doi.org/10.1001/20202.04.25.20075369>.
 38. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

40. Costa G, Schizzerotto A. Se la pandemia accentua le disuguaglianze di salute. Lavoce.info 07-04-2020.
41. Ahmed F, Ahmed N, Pissarides C, Stiglitz J. "Why inequality could spread COVID-19.", Published Online April 2, 2020 [https://doi.org/10.1016/S2468-2667\(20\)30085-2](https://doi.org/10.1016/S2468-2667(20)30085-2)
42. Mackenbach JP. Persistence of social inequalities in modern welfare states: Explanation of a paradox. J Epidemiol Community Health 2013; May;67(5):412-8
43. OMS Governance for health equity. Taking forward the equity values and goals of Health 2020 in the
44. WHO European Region. Ginevra: OMS; 2013, pp 80,
45. Istat Rapporto BES 2017 Roma: Istat; 2017.
46. Istat Rapporto BES 2018 Roma: Istat; 2018.
47. Bettelheim C. Le lotte di classe in URSS 1917/1923. Milano: Etas Libri 2 vol; 1975./1066861.pdf
48. Regione Umbria) Piano Sanitario Regionale Un patto per la salute, l'innovazione e la sostenibilità'. Cap 7: Qualità e innovazione per la gestione della sanità.. Perugia: Direzione regionale sanità e servizi social; 2003.
49. Romagnoli C, Minelli L. Metaorganizzazione e innovazione nel governo della salute. L'esperienza del Servizio sanitario regionale umbro Politiche sanitarie 2008; 9(3):133-139.
50. ISDE FNOMCEO Covid 19 Le lezioni da imparare e gli errori da non fare; 2020. <https://www.isde.it/covid-19-le-lezioni-da-imparare-e-gli-sbagli-da-non-fare/>
52. Ostrom E, Hess C. La conoscenza come bene comune. Dalla teoria alla pratica. Milano: Bruno Mondadori Ed; 2009.
53. Hardin G. The Tragedy of the Commons. Science 1968; 162.
54. Castells M. La nascita della società in rete. Blackwell Publisher Ltd, Oxford 2000; ed. it Università Milano: Bocconi editore; pp 438.

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