

Concept Paper

The COVID-19 Contagion–Pandemic Dyad: A View from Social Sciences

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Abstract: The objective of this concept paper focuses on the relevance of the analytical potential of Social Sciences for understanding the multiple implications and challenges posed by the COVID-19 contagion–pandemic dyad. This pandemic is generating a global threat with a high number of deaths and infected individuals, triggering enormous pressure on health systems. Most countries have put in place a set of procedures based on social distancing, as well as (preventive) isolation from possible infected and transmitters of the disease. This crisis has profound implications and raises issues for which the contribution of Social Sciences does not seem to be sufficiently mobilised. The contribution of Social Sciences is paramount, in terms of their knowledge and skills, to the knowledge of these problematic realities and to act in an informed way on these crises. Social Sciences are a scientific project focused on interdisciplinarity, theoretical and methodological plurality. This discussion is developed from the systems of relationships between social phenomena in the coordinates of time and place, and in the socio-historical contexts in which they are integrated. A pandemic is a complex phenomenon as it is always a point of articulation between natural and social determinations. The space of the discourse on the COVID-19 pandemic can be understood as the expression of a coalition of discourses, i.e., the interaction of various discourses, combined in re-interpretative modalities of certain realities and social phenomena. The circumstantial coalitions of interests, which shape the different discursive records and actions produced by different agents of distinct social spaces, enable the acknowledgement and legitimisation of this pandemic threat and danger, and the promotion of its public management.

Keywords: COVID-19; social sciences; inequality; pandemic; contagion; social distancing

1. Introduction

An epidemic of viral-appearing pneumonia of unknown aetiology emerged in Asia in December 2019. In January 2020, the identification of a new coronavirus was officially announced by Chinese health authorities and the World Health Organisation (WHO). It was first called NCoV 2019 and then SARS-CoV-2. This new virus is the agent responsible for the infectious respiratory disease called COVID-19. On 11 March 2020, WHO announced that COVID-19 could be qualified as a pandemic, the first one triggered by a coronavirus.

The epidemic phenomena are the expression of a violent clash between species [1] and between humans and non-humans [2,3]. Coronaviruses (CoV) entail a large group of viruses, some of which are pathogenic to humans, whose infections are usually associated with clinical respiratory manifestations, without high severity. Over the last decade, two new coronaviruses have emerged as highly pathogenic infectious agents for humans, causing potentially lethal infections. These coronaviruses have been responsible for the SARS (Severe Acute Respiratory Syndrome Coronavirus) and the MERS (Middle East Respiratory Syndrome-related Coronavirus) respiratory syndromes. Both SARS-CoV and MERS-CoV viruses have a zoonotic origin, i.e., their natural reservoir is animals, in particular some species of bats. The genesis of the SARS-Cov-2 coronavirus, although raising some doubts, also had a zoonotic origin [4].

In the process of naming the SARS-CoV-2 virus, WHO favoured a “politically correct” nomenclature, which sought to prevent the stigmatisation of the Chinese regions associated with the genesis of the pandemic. This potential stigmatisation was present in the designations “West Nile Virus”, “Lhasa Fever” (a city in Nigeria, located in the Yedseram River Valley), “Ebola Virus” (a river in the Democratic Republic of Congo), “Middle East Respiratory Syndrome” and, in the H5N1 outbreaks, “from Fujian” (a province in South-East China) or “from Qinghai” (a lake in West China). The WHO’s strategy to prevent this was to name viruses and viral outbreaks with an emphasis on the molecular structure. The focus on the molecular can be deemed as a way of blurring the relevance of economic and environmental factors in the emergence of new strains of a virus, particularly in the case of the H1N1 or H5N1 variants, i.e., industrial livestock. Since the late 1970s, with the globalisation of intensive pig and poultry farming, outbreaks of the increasingly virulent influenza have multiplied. In industrial animal husbandry, stocking density and genetic homogeneity provide “the perfect incubator” for viruses, which have an evolutionary interest in transmitting faster and becoming more virulent [5].

The COVID-19 pandemic is generating a global threat. By mid-July 2020, there were 14 million people infected, 7.7 million considered cured and about 600,000 dead. However, the exact number of those infected due to a lack of testing or those killed due to underreporting is not known. This pandemic has most significantly affected the older population and/or individuals with respiratory complications and other similar pre-existing diseases [6–8].

The vast majority of countries [9–11] have imposed a set of preventive procedures and devices, in addition to medical tests, based on isolation, quarantine, community containment and physical distancing [12,13], travel restrictions, hand hygiene and the banning of events and gatherings. These measures have led to the temporary closure of several economic and social institutions, a relative national lockdown in several countries and enormous pressure on health systems [12,14–23]. However, countries such as Sweden, South Korea and Taiwan did not impose total containment but followed a strategy that articulated quarantine targeting risk groups, monitoring, and large-scale testing, together with social distancing measures (even the use of masks).

The extraordinary and temporary measures adopted by a significant number of countries sought to keep people confined to their homes, in prophylactic isolation and, preferably, in a teleworking regime where the functions concerned were allowed. This situation could not take place if people were unable to telework or to carry out activities deemed essential and a priority. In some countries, individuals should remain in their homes, although they could go out for exercise once a day, to buy food and other essential items. The sick and elderly should also stay in their homes. Several restrictions were imposed on the interactions between people who were not cohabiting; for example, they could not interact with more than one person and should respect the distance of two meters from other people [10,24].

Without yet knowing the specificities of the effects of the different dimensions of the pandemic on mental health, it is possible, however, to assess its importance with the data already available. The stigmatisation and production of scapegoats—already known in other epidemics and other historical moments—in the case of COVID-19, have victimised some health professionals and individuals from minority social groups. The uncertainties and partial mistrust of medical knowledge and information,

together with the publication of conspiracy theories have also added to the emergence of a diffuse living disease that does not facilitate mental health. In this context, some disturbances, which are characteristic of uncertainty/unpredictability and lack of self-control in the relationship with oneself and with others, have emerged. As indicators of the fragility of these relationships, the increase in generalised anxiety and obsessive-compulsive disorders, aggressive depressions, insomnia and feelings of frustration [25] are understandable.

These various measures have a profound impact on everyday life, and the future consequences for the reconfiguration of social life are unknown [20,26]. This is a dynamic situation with varying amplitude, taking into account the geographical, economic, societal and cultural contexts affected. Social distancing (this is the term medically consecrated and, therefore, used in this article, although the physical distance corresponds to what is under discussion) may be effective in preventing contagion and deaths, although it can be perceived as insidious to the economic activity since social distancing usually entails economic distancing: most industries require workers to develop close interactions to produce goods, while various services require close contact between customers, users and suppliers, or between customers [13].

However, inequality in various dimensions is a critical element, affecting responses to COVID-19 and even exacerbating inequalities [11,27–29]. Poorer populations, and especially older ones, are more vulnerable to infection and more vulnerable to the most serious consequences. The pandemic is generating a significant economic crisis and, consequently, unemployment rates will tend to increase substantially. Furthermore, weakened social safety nets further threaten the health and social security of the most vulnerable social categories also in day-to-day situations, such as to buy masks, gloves and disinfectant, as well as the greater need of these social groups to travel in public transports. Poor people who do not have access to health services under normal circumstances are more vulnerable in times of crisis. The manipulation of information, poor content quality and difficulties in accessing communication and information technologies affect individuals with fewer resources and enhance illiteracy, making them more likely to ignore the health warnings developed by the governments [11,29].

In several discursive records, widely disseminated in the global public space, the idea is conveyed that this is a moment of unpredictable and disturbing rupture: a “health crisis”, an “international health emergency”, using WHO’s expressions. The notion of crisis entails a normal state and its temporary disturbance before a return to normality, i.e., the emphasis is placed on a linear view of the crisis [30]. A crisis has several properties: the loss of meaning, the de-sectorisation and its complex, urgent and dynamic nature. These three dimensions are combined. A crisis is a test of an existing order and, in particular, of cognitive categories and actions, but also of the limits and hierarchical structures that organise it, which can lead to organisational collapse [31–35]. Another challenge underlying the widespread use of the “health crisis” notion lies in the appreciation of the noun “health”. By qualifying the event in this way, priority is ascribed to the health framework over others. However, one of the effects of these “crises” is to go beyond the usual organisation by sectors, producing a “de-sectorisation” [32]. This forces people to think outside their sole area of competence and forces coordination. The health, social, ecological, economic, financial and political dimensions of a “pandemic crisis” are interdependent.

The pandemic, as a global threat, is therefore imbued with a constant state of crisis, in which the crisis becomes permanent and the cause that explains everything [36]. This global threat has an epidemiological and medical dimension, but also a political and governance one. The clinical and epidemiological approaches imbricate to a political component (power, violence, constraint) and a governance component (state structure, governments’ behaviour). The State’s mastery of threats depends on its capacity to create, develop and manage complex and specialised organisations (care and health system, agencies and expert committees, among others), its capacity to ensure the continuity of its functioning and the mobilisation of its resources, as well as its power to control the use of coercion in response to global threats and dangers [37].

What added to the crisis was the decision of the authorities in many countries to resort to general population containment for a long period [31]. There are no studies that allow political actors, when taking this type of decision, to anticipate its consequences for the physical and mental health of populations, the relationships within households, the care of dependent, isolated or precarious individuals, the economy, work, the life of organisations or education. Governments only have hospitalisation and mortality rates as indicators to guide their actions. To this loss of meaning can be added the confusion in crisis management between the different authorities at the top of the state, as the borders are unclear and give rise to jurisdictional struggles [31].

This economic, social and health crisis has serious and profound implications that raise questions to which the contribution of Social Sciences does not seem to be sufficiently mobilised by policy-makers (research in SCILIT, virtual social networks and other databases) [38]. Social Sciences can collaborate more intensely in better knowing and managing this epidemic [20,22,39–41].

Besides studying society, Social Sciences are also part of it. They develop a permanent self-reflexivity as a social practice and system of representations, stage of conflicts of interest and power games, on the practices of Social Sciences as a scientific and professional activity socially conditioned, socially produced and always with social consequences [42,43]. This reflexive capacity establishes the domain of the symbolic and becomes effective to the extent that it provides cognitive and representative elements of adaptation to reality. The knowledge and representations that individuals, groups and societies have and use—generally referred to as “common sense”—are, in modern societies, increasingly shaped by Social Sciences. This social appropriation of knowledge developed by Social Sciences has a return effect by causing a permanent rethinking of problems and conceptual elaborations [44]. The potentials of this reflexivity frame the reflection on several domains of the “societies of individuals” [45] affected by this permanent crisis.

The objective of this concept paper focuses on the relevance of the analytical potential of Social Sciences for the understanding the multiple implications and challenges posed by the COVID-19 contagion–pandemic dyad. This crisis has profound implications and raises issues for which the contribution of Social Sciences does not seem to be sufficiently mobilised. In the analysis, the contribution of Social Sciences is paramount, in terms of their knowledge and skills, to the knowledge of these problematic realities and to act in an informed way on these crises. Social Sciences are a scientific project focused on interdisciplinarity, theoretical and methodological plurality. This discussion is developed from the systems of relationships between social phenomena in the coordinates of time and place, and in the socio-historical contexts in which they are integrated. A pandemic is a complex phenomenon as it is always a point of articulation between natural and social determinations. The discourse space on the COVID-19 pandemic can be understood as the expression of a coalition of discourses. The circumstantial coalitions of interests, which shape the different discursive records and actions produced by different agents of different social spaces enable the acknowledgement and legitimisation of this pandemic threat and danger, and the promotion of its public management. It is, therefore, important to promote an interdisciplinary scientific project characterised by the interdependence between the epidemiological, medical and biological knowledge and the knowledge produced by the Social and Human Sciences to better understand an economic, social and health crisis of such a huge scale and to shape the medical and political management of this and future epidemics and pandemics. To attain this goal, the article is divided into the following sections: Methods; COVID-19: the contagion–pandemic dyad; multiple implications of the COVID-19 pandemic; and Conclusion.

2. Methodology

The methodology used in this article is qualitative, as the article seeks to understand the multiplicity of facets and dimensions that characterise the plural discursive space of social sciences about the COVID-19 contagion–pandemic dyad. This discursive space may be envisaged as the expression of a coalition of discourses, that is, the interaction of several discourses, combined in re-interpretative modalities of certain realities and social phenomena.

The document analysis was the favoured technique in this research, developed from different types of documentary sources. In a documentary study, documents can be understood as “means of communication”, created with a purpose to attain a goal. They can be seen as a way to contextualise information, and are analysed as communicative devices methodologically developed in the production of versions about events [46]. Considering that documents are instruments and communication supports that express objectified forms of experiences and knowledge related to a specific sector of human practices, the whole document is likely to be contextualised in a specific social and cultural framework. In this context, of a complex nature, documents are inserted into the framework of social relationships and play a given role in the game of social relationships, ascribing value to acts or shaping relationships [47].

The type of the selected documentary sources encompasses articles and interviews, produced by several scientists in the fields of social sciences, epidemiology and public health. When expressing different stances and interests in the scientific, political and societal fields, these authors were important in the understanding of the construction of the discursive space on the social configuration of the COVID-19 pandemic. These documents create and display cognition policies: the language is used to build an “official” reality—often on classifications that produce the promotion or marginalisation of ideas—and the contemporary concepts, which define the situations and shape the readers’ preferences, perceptions and cognitions. These documents may be viewed as places of symbolic struggles in terms of the perception of the social world. These symbolic struggles may have two different forms. The objective form shapes the possibility of acting through individual or collective representation actions, which aim to show and promote specific realities. The subjective form models the possibility of acting, seeking to change the categories of perception and assessment of the social world, the cognitive and evaluative structures: the categories of perception and the systems of classification, that is, the words and the names that build the social reality as much as they express it [48,49].

3. COVID-19: The Contagion–Pandemic Dyad

At present, COVID-19 is seen as a pandemic, a new “plague”, referring to the matrix metaphor of the plague expressed in the coalescence of two semantic nuclei: contagion/death [50]. The term epidemic, which refers to a disease that suddenly affects a large number of people and can cause a high number of deaths, has a very close meaning to the Latin word *pestis*. This term emerges in the 12th century, in Latin texts, as an erudite form of designation of the social phenomenon that until then was called *pestis* [50]. In various discursive records of a religious, poetic and medical nature, the term *pestis* and its derivations designate a terrible evil, a great misfortune, or even a polluted, contaminated, unhealthy, insane and often deadly condition. It represents a contagious disease but, above all, the great evil. The domains and conceptual uses of contagion, its modalities and its effects, in its various historical contexts and meanings, express the interdependence between the positions and the different points of view of the various actors involved in multiple scientific, moral, social and political challenges.

The contagion–epidemic dyad was underpinned by the perception of great danger, amplified in contemporary societies by the extreme speed of information circulation of people and goods. The belief in the contagion of epidemic diseases and events perceived as dangerous can be identified with the symbolic dimension of impurity, which expresses the dangers to the social order and the purity of a group, emerging as a guarantee of the avoidance of any physical and social approach to the sick and other individuals perceived as dangerous in a given community. This articulation between impurity, purification and interdiction of contact by believing in contagion shapes the symbolic management of internal and external dangers that threaten the various societies in different time-spaces. This dyad is related to experiences of fear, exasperation, denial and rejection of the other, recalling the old attitudes of populations threatened by the plague, such as those of escape, purification and isolation [51]. The perceptions and representations of contagion convey negative or derogatory cognitive sensations

and evaluations suggesting the malignity of the other, the other as a source of threat and danger, leading to generic fear in which contact is perceived as the possibility of aggression and contamination.

A significant number of epidemics are characterised by a mode of inter-human transmission. For such an epidemic to occur, social interactions between individuals and groups of individuals must occur. The more numerous, regular and rapid these interactions, the higher the risk that an epidemic will break out and spread on a large scale. Conversely, a pathogen will find it more difficult to transmit in a group of individuals whose interactions are weak, or between groups that have few relationships with each other.

As mentioned, in early December 2019, a new coronavirus causing potentially severe pneumonia emerged in the Asian region. Although the first cases of infection were identified in fish-market-goers, new infections were quickly detected in individuals that did not visit this market. The reservoir of this coronavirus is probably an animal. SARS-CoV-2 is genetically very similar to other animals circulating in China in the natural populations of horseshoe bats of the species *Rhinolophus affinis* [52–54]. This virus may have resulted from a natural genetic combination of two coronaviruses with two different animal hosts [53]. Some studies suggest that the pangolin, a small mammal consumed in Southern China, could be involved as an intermediate host between bats and humans. It quickly became clear that this virus could be transmitted between infected humans. Transmission between humans has been established and experts estimate that, in the absence of control and prevention measures, each patient could infect between two and three individuals [54].

The mode of transmission appears to be carried out predominantly by droplets of respiratory secretions during prolonged close contact or by direct contact when the infected person coughs, sneezes or talks, which can be inhaled or landed in the mouth, nose or eyes of people who are close by. A growing body of epidemiological data currently available on cases around the world shows that the vast majority of cases have been linked to transmission from person to person during unprotected close contact with a person with symptoms compatible with COVID-19 [52]. Coronaviruses may also remain viable (i.e., maintain their infectivity) for a few days in the environment and this period depends, for example, on environmental temperature or exposure to ultraviolet radiation. Thus, the transmission of these viruses to humans may occur when hands, contaminated by contact with, for example, surfaces where these viruses may have been deposited, are brought into the eyes, nose or mouth. Regarding specifically COVID-19, WHO estimates that the incubation period of the virus varies between one and 14 days, with an average time of five days. During this relatively long incubation period, individuals may be asymptomatic carriers of the virus and, hence, contagious agents.

When a person is in contact with a pathogen, such as a virus or a bacterium, his or her body establishes a defence process: the body's immune system produces antibodies, specific molecules of the pathogen, which bind to it and destroy it. These antibodies continue to be produced and circulate in the bloodstream after healing: it is the principle of "individual immunity", which allows the body to protect itself from a second infection by the same pathogen. "Group immunity" derives from this principle; if a high proportion of people in a given population have been infected with a virus, the individuals will become immune to the pathogen, breaking its transmission chain. The proportion of the people needed to establish group immunity in a given population varies according to the pathogen involved and the degree of contagiousness of the disease. This degree of contagion is measured by the term R_0 , which indicates how many new infections are caused by each case. For COVID-19, the R_0 is estimated to be 3.28 in the UK, although this figure is likely to change because studies are still ongoing. This means that, to have group immunity, about 70% of the population from the UK would have to be immune to COVID-19 [55].

Social interactions on a global scale shape pandemics [56]. Rather than progressively globalising from one scale to another—from local to global to national and regional—global epidemics emerge directly on a global scale and coexist with other epidemics on lower scales [57]. This argument favours three elements: (i) epidemics spread thanks to co-presence and mobility; (ii) epidemics spread according to a mainly topographic logic; and (iii) the spread of world epidemics is mainly topological [56].

Societies have three means of optimising their interactions: (i) co-presence, i.e., the gathering of several individuals in the same place; (ii) mobility, which corresponds to the movement from one place to another; and (iii) telecommunications, which enable individuals to come into contact with one another without moving. Co-presence and mobility play a critical role in the spread of epidemics. First of all, the large concentrations of individuals that cities allow a pathogen to have access to a large number of potential hosts and, thus, be able to evolve more rapidly than the progressive immunisation of populations. Transport enables pathogens to spread more quickly and further but also to reach non-immunised populations.

The spread of pandemics is mainly topological. The spread of HIV/AIDS (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome) and SARS has developed mainly according to topological logics, in which the notion of proximity is defined in terms of connectivity between different points of a network [56]. The rules of diffusion entail that a site strongly linked to the point of origin of the epidemic will, usually, be affected before a weakly linked site, regardless of the distance in kilometres; sites affected at the same time from the same starting point of the epidemic have a similar degree of connection (they may, then, be thousands of kilometres away from each other). The topographic and topological diffusion or network logics are interdependent. Thus, it is possible to distinguish three scales of diffusion for the same epidemic: national, regional and global [56]. These three scales are present in the process of dissemination of the COVID-19 pandemic: one worldwide, which spread from the city of Wuhan within the Megalopolitan World Archipelago [57]; one regional, which mainly affects Southern Europe, the United Kingdom, the United States of America, Mexico and Brazil; and one national, whose features may vary in each affected country.

The literal or metaphorical sense of the notion of contagion can be mobilised to qualify the distribution of a medical and/or social phenomenon, characterised by its modalities of expansion, transmission and distribution, by an exponential propagation speed, sometimes associated with an unexpected origin and an unpredictable end. The notion of contagion often expresses fear, vulnerability, ignorance and powerlessness but also implies the mobilisation of warning procedures, as well as prevention and preparation devices, to deal with these disruptive situations. The discourses on contagion shape the normative justifications, developed by the institutions to formulate and implement coercive measures, namely isolation, quarantine, social distancing and exalting the saving qualities of vaccines. Naming contagion allows for the naturalisation of a threat, which an uncontrolled proliferation of an illness or disease poses in a particular community, justifying the adoption of measures to manage this threat [3].

4. Multiple Implications of the COVID-19 Pandemic Virus

The COVID-19 pandemic can be regarded as the first pandemic of the globalisation era since it articulates certain features: global scale, extremely fast transmission speed, cross effects of global inter-territorial interdependences, the interdependence of nations in the management of their respective epidemics, and growing complexity in the spatial organisation of economic globalisation [58]. Pandemics may be viewed as one of the main risks of modernisation. The consequences of scientific and industrial development are a set of risks that cannot be contained in space or time, for example, in addition to ecological risks, environmental degradation (causing viruses spill-over between different species), the exponential development of the transport network (commercial aviation has been instrumental in the rapid spread of pathogens). Furthermore, there is a change in patterns and lifestyles and an exponential increase in the consumption of animal protein [59], increasing and massive precariousness of living conditions, with individualisation of social inequality and uncertainty about employment conditions, leading to widespread exposure to risks [60]. While increasing inter-population connectivity, globalisation increases in scale and intensity of action and impact.

Due to the impact of global risks, countries, even in the West, are more authoritarian but inefficient when it comes to dealing with different global threats and hazards, becoming “strong failed states” [60] (p. 79). This is also linked to the issue of insurance and the degree of risk control. Private insurance is

coming to an end, and the state is always the ultimate guarantor of the value of goods and people's lives. The state thus takes on a central role at a time when most risks are global [60,61].

The COVID-19 pandemic is not an unprecedented phenomenon. It is part of a process of emergence and re-emergence of infectious diseases, which has presented many severe episodes in recent decades. Some examples are Influenza H5N1 in 1997 and 2005, SARS in 2003, H1N1 in 2009, MERS in 2012, and the Ebola epidemic since 2014. These epidemic phenomena have been characterised by significant health risks for populations and health professionals, given the high virulence and high degree of exposure of these professionals, in particular the SARS epidemic. This epidemic has given rise to a twofold surprise: on the one hand, the emergence of a new pathology with an unprecedented rate of spread and, on the other hand, the refutation of a dogma rooted throughout the 20th century, according to which the control of infectious phenomena in the developed world would protect it from health disasters, while the corollary of the significant increase in risk would only affect developing countries [62].

At the beginning of the 21st century, WHO encouraged countries to prepare for a severe pandemic and its occurrence was deemed very likely from 2003 onwards. It called on all countries to establish national pandemic planning committees [63]. A kind of revolution in health policy would be underway, adding a culture of preparedness to a culture of prevention (disease prevention). Preparedness covers a set of notions, strategies and activities, and can be systematically defined around three axes: prevention of major epidemics through epidemiological surveillance and early detection of epidemic outbreaks; establishment of rapid responses, producing and sharing data, knowledge and technology; and improving the global governance of the response to epidemics [64–66]. Several procedures have been adopted for the preparation of a health system for large-scale health threats. In some countries, public bodies have decided to create and manage a national health reserve: medicines (antivirals, vaccines) and materials (various types of masks, among others). For example, in France, it was decided to finance a national mask industry not to depend on uncertain imports, particularly from China [63]. These plans for intervention and the organisation of countries to reorganise societies and maintain the essential functions of the economy were developed integrating the main WHO recommendation: the need to mobilise society as a whole in this process of preparation [63].

However, the H1N1 epidemic in 2008–2009 had a paradoxical effect. Heralded as terrible, the pandemic was considered much less serious, despite causing over 200,000 deaths worldwide. The failures of global and local governance to prevent and regulate permanent financial crises, environmental risks, the crisis in international institutions and the inherent increase in geopolitical risks have led to demobilisation and budget cuts, reducing these preparedness devices to almost nothing, an expression of general political indifference.

This volatile situation has shaped thinking and managing health threats and the subsequent response of individual countries to the COVID-19 pandemic. Not only has there been no upstream preparedness, but it is precisely the idea of crisis preparedness that seems to be totally absent from government actions. The measures that are too limited or too late may be the subject of criticism but, more fundamentally, it is the consequences of this or that measure taken after the declaration of a state of emergency that had not been foreseen, precisely because of lack of preparedness [63]. Faced with this "anomaly", one could expect a scientific and political consensus between various actors for its political and medical management, the definition of urgent and collective actions and the demand for a common defence, surveillance and prevention logic by the States involved in a pandemic threat. In the face of this threat, the variations in States' preventive or prophylactic strategies are pure products of politics, of the effects of the nature of the regimes in force, as much as—if not more than—the circumstances surrounding the very course of the epidemic [37]. In the areas of national sovereignty, in particular, concerning the policies of confining populations and closing borders, there is weak coordination between the various countries.

The management of public health crises, of emergencies, has gained a political dimension, rather than a scientific or technical one because health problems are extremely sensitive to the public

and include major political risks. In this political management, the relationships between political decision-makers, experts and economic agents are critical [67], knowing that the uncertainty of the context of science intersects with the interpretative uncertainty of each of the actors involved [68].

The impacts of the COVID-19 pandemic are multiple: social, economic, health, political, educational, labour and employment, ethnic-racial, on freedom and on citizenship rights. In addition to these multiple impacts, they are interlinked in complex, sometimes paradoxical ways and produce inequalities, social injustices and different types of discrimination [29]. Individuals, groups and countries are not all equal in their vulnerability to disease. The pandemic crisis has led to the worsening of social inequalities in the global context, between countries and within countries; the most disadvantaged and vulnerable ones are increasingly disadvantaged and vulnerable. In several social categories, there are situations of increased inequality, and others are affected by new situations of inequality: (i) older people, who belong to one of the high-risk groups of infection with the coronavirus, are less prone to use distance communication tools and are more likely to be socially isolated; (ii) young people, who directly suffer the effects of disrupted education in these troubled times and, hence, may have more difficulty of find a good job upon conclusion of their studies; (iii) women, who are more susceptible to become children or elderly carers and may have higher risk of being victims of domestic violence; (iv) individuals from East Asia, who may be at higher risk of discrimination and even persecution due to the fact that COVID-19 is associated with East Asian countries, notably China; (v) individuals with reduced communication competences and literacy, who may not receive or understand official communications on the pandemic; (vi); homeless people, who may find it hard to self-isolate or seek for support; and (vii) workers on precarious contracts or self-employed, who have higher risk of reduced to no income [24].

There is a fundamental difference in the vulnerability to the pandemic between the countries that have social states based on the principle of universality in access to health care and social protection and those where such states do not exist. The management of COVID-19 by health systems is shaped by several relevant elements, namely the degree of contagion, the degree of exposure to the market of people and countries in access to health care, and community-based management of the disease. A significant resource constraint, associated with a scenario of continued downgrading and submission of other relevant health activities, has characterised this pandemic crisis management process, leading to the neglect of all other diseases, including chronic, oncologic, cardiovascular and mental diseases, which could culminate in a significant increase in morbidity and mortality rates [59].

Another significant impact of this crisis is on the operating conditions of democracy. The response to the pandemic raises the restriction of freedom of movement, containment of activities, the strengthening of the countries' executive powers. In some countries, the strategy of governments has been to annul democratic order, suspend the functioning of parliaments and attempt to govern by decree, and trivialise exceptional symbolic resources—e.g., the use of the armed forces to control public order [69]. The world is witnessing the consolidation of some features of technocratic authoritarianism, which is very present in China, namely the attraction of the electronic means of citizens' permanent surveillance—surveillance of contact networks and surveillance of infected people, among others.

The first assessments of the economic impacts of the pandemic crisis point toward a drop in global trade of goods by 2020 of more than 35%, a drop in tourism revenue flows of more than \$500 billion, and losses in commercial aviation of close to \$70 billion. The fall in economic activity could range from −3% for the world economy, −6% for the United States economy and −7.5% for the euro area [70]. IMF (International Monetary Fund) estimates a drop of 3% in global GDP (Gross Domestic Product) in 2020, with will be much sharper in advanced economies (−6.1%) than in emerging or developing economies (−1.0%) [71]. In 2020, around 90% of the countries in the world will face a recession. For the Euro Zone, it is estimated that the unemployment rate will increase from 7.6% to 10.4% in 2020, representing the loss of around 4.5 million jobs. In the United States, the unemployment rate, according to these estimates, almost triples, reaching 10.4% in 2020. In China, the unemployment rate is expected to increase by only 0.7% in 2020 [70–72].

Almost all countries have implemented strict movement controls to cope with the COVID-19 pandemic. The aim is to prevent transmission by reducing contact between people and to slow down the spread of infection by reducing the risk of public health services, which will be overloaded. However, these measures may also prolong the pandemic and the restrictions adopted to mitigate it [24].

5. Social Sciences and COVID-19

The contributions of the perspectives developed by the various Social Sciences on the disease, contagion and epidemics remain in a relatively secondary position in the public arena in this process of pandemic crisis. On the contrary, epidemics seem to be a prerogative of the Hard Sciences, where biological and epidemiological categories are repeatedly mobilised to explain the epidemic phenomenon and often also to analyse historical and social phenomena. Several authors, relying on certain epidemiological methods to analyse the factors contributing to the general history of human populations, maintain that the movement of populations, their evolution and mutations would be causally dependent on epidemics, the history of microbes and viruses. This approach would allow a posteriori modelling of the determinants of population evolution [73,74].

The analysis of social determinants of health involves the deconstruction of biomedical assumptions in the analysis of social determinants of health: the epidemiological risk factors. Risk does not only relate to the knowledge of a given pathology, its transmission and evolution. Risk is a central category in the management of public problems, enabling responses to be shaped to the social representations of risk and to the uncertainties and possible dangers which individuals are exposed to, by the classifications and identifications it operates. In pandemic threats, individuals face competing risks. Some people are willing to expose themselves to the risk of being infected by the coronavirus because they do not comply with the containment measures, inasmuch that the immediate competing risks weigh more heavily: they run the risk of losing their jobs, their income; they fear loneliness [75].

Disease and health, regardless of the biological and physiological dimensions that make up their medical and clinical realities, can be regarded as symbolic maps that reveal the political, social and cultural structures that ascribe them meaning, involved in multiple regulatory regimes. The establishment of moral boundaries supports the process of categorising and labelling diseases, based on the functioning of the binary model, which, for example, opposes decent diseases to indecent diseases; shameful diseases to morally acceptable diseases; pure diseases to impure diseases; polluted diseases to impure diseases; clean diseases to dirty diseases [76]. Epidemics and contagion reinforce prejudices and enhance stigmatisation processes: against the Jews (the 1347–1350 plague), against the poor in the Renaissance (the plague, typhus), against Irish immigrants in the 19th century (cholera), against the poor in the 19th and 20th centuries (tuberculosis), against the four Hs (homosexuals, Haitians, haemophiliacs and heroin-maniacs), in the 1980s (HIV/AIDS), against Africans (Ebola), against Chinese and Asians (bird flu, SARS and the coronavirus), against the “stranger”, the “foreigner”: the “other” ...

The pandemic configuration is shaped by interdependent relationships between social structures and individuals. Social behaviours, structures and cognitive assessments are influenced by the unfolding of pandemics, as is the case of COVID-19 [8], with profound implications for the organisation of a society [20]. Table 1 offers some examples of this social dimension.

The measures adopted by many countries and regions to establish quarantine, social isolation and community containment have profound implications beyond the purely medical and public health aspects in controlling this disease. On the one hand, they raise questions about individual freedom and human rights [14,23,78–83]. On the other hand, social interactions and social institutions are central elements in the control of this disease [7,14,40], which brings out the importance of the Social Sciences’ perspectives. For example, concerning social interactions, in Southern European countries intergenerational interactions are more frequent than in other parts of Europe since social norms about

providing support to family members and maintaining interpersonal family interactions are stronger than in Central and Northern European countries, which are less family-oriented [40].

Table 1. Impacts of the pandemic dynamics.

1	Communities at various scales (i.e., towns, cities, nations, regions) with higher levels of economic wealth, more equitably distributed temporally and spatially, will generally tend to be more resilient to existential and other threats.
2	Where communities are comparably affluent and on an increasing trajectory of affluence, those with more equitably distributed wealth and higher floors of minimum wealth are probably more likely to be more resilient.
3	From a community development (i.e., municipal, state, regional) and public infrastructure perspectives, it appears socially-equitable economic development leads to more efficient outcomes, with respect to system resilience, than does inequitable economic development.
4	Both socially-equitable and socially-inequitable development scale up, and hence, communities can learn and implement best and effective practices for socially-equitable development as a resilience strategy for infrastructure, economic and community development at higher scales.
5	The fact that climate, pandemic and other threats are no respecter of persons elevates the importance of socially-equitable development as a resilience strategy.
6	Infrastructure policymaking, planning, design and construction, maintenance and renewal approaches, if they do not formally incorporate equity considerations, will lead to the development of less resilient infrastructure and communities, with avoidably higher opportunity costs.
7	Social equity is intimately intertwined with economic advancement. Socially-equitable economic development can foster not only socially-equitable advancement that creates better conditions for all but also support the development of system resilience-economic, social and infrastructure.

Source: Amekudzi-Kennedy, Labi, Woodall, Marsden and Grubert [77].

Thus, according to social scientific insights, several responses to COVID-19 should be encouraged for more efficiently dealing with the pandemic. Among them, van Bavel et al. [41] (p. 2) identify and highlight the following:

- A shared sense of identity or purpose can be encouraged by addressing the public in collective terms and by urging “us” to act for the common good.
- Identifying sources (e.g., religious or community leaders) that are credible to different audiences to share public health messages can be effective.
- Leaders and the media might try to promote cooperative behavior by emphasizing that cooperating is the right thing to do and that other people are already cooperating.
- Norms of prosocial behaviour are more effective when coupled with the expectation of social approval and modeled by ingroup members who are central in social networks.
- Leaders and members of the media should highlight bipartisan support for COVID-related measures, when they exist, as such endorsements in other contexts have reduced polarization and led to less biased reasoning.
- There is a need for more targeted public health information within marginalized communities, and for partnerships between public health authorities and trusted organizations that are internal to these communities.
- Messages that (1) emphasize benefits to the recipient, (2) focus on protecting others, (3) align with the recipient’s moral values, (4) appeal to social consensus or scientific norms, and/or (5) highlight the prospect of social group approval tend to be persuasive.
- Given the importance of slowing infections, it may be helpful to make people aware that they benefit from others’ access to preventative measures.

- Preparing people for misinformation and ensuring they have accurate information and counterarguments against false information before they encounter conspiracy theories, fake news, or other forms of misinformation, can help ‘inoculate’ them against false information.
- Use of the term “social distancing” might imply that one needs to cut off meaningful interactions. A preferable term is “physical distancing,” because it allows for the fact that social connection is possible even when people are physically separated.

The processes of knowledge denominate and qualify social reality at the very moment of analysis, and disciplines establish dimensions of that reality when analysing it. The plurality of Social Sciences results, on the one hand, from the real complexity of human action, which demands complex analytical levels and elaborations, and, on the other hand, from the approximate and parcelled nature of scientific knowledge, which denies the possibility of unitary knowledge of the real [84]. Seeking to know social reality entails the mediation of categorical frameworks, logical operators of classification, ordering—as complex processes influenced by our needs, experiences and interests—that provide information about this reality and ways of making it intelligible, but confusing with it [84].

Bearing in mind that each Social Science has a specific perspective on social reality, the pandemic crisis, as a complex and multidimensional phenomenon, can be understood from different perspectives. This discussion would be developed from the systems of relationships between social phenomena in the coordinates of time and place, and in the socio-historical contexts where they are integrated. The conceptions of common sense and ideologies about these processes would also be the object of analysis [84]. Social Sciences are crossed by large, distinct, partially overlapping and partially contradictory theoretical configurations that guide empirical research from different paradigms that preserve zones of specificity and, also for this reason, can lead to results and rival explanations of the reality they analyse [44].

The investment of political actors in the collective management of epidemic diseases has enabled the emergence of the autonomous public health area. Politicians can be regarded as power relationships mobilised in the public space for the control of decisions and actions that have as their object assets deemed collective [85]. It may be questioned whether the political management of this pandemic crisis expresses a reconfiguration of the social space of public health, in which surveillance, monitoring, evaluation and risk management would have a place of growing importance, supported by technologies of visualisation, tracking, analysis and a “molecular vision of life”, which would be associated with a division of labour, differentiating and fragmenting the “objects” of medicine. Health practices would be increasingly shaped by the demands of a new political health economy, subject to the imperatives of large groups and companies, insurance companies and, in general, the world of bio-capital and would reach the public health systems themselves [86](p. 150).

In the response to the pandemic, inequalities have not been mitigated but rather reinforced. This situation leads to the equation of social inequalities in the near future from three axes: inequalities and the social state; inequalities and digital transformation; and inequalities and science [29]. Regarding the first axis, the institutions of the social state, mainly the National Health Service, the public social protection system, retirement and old-age pensions, unemployment and sickness benefits, are pivotal in containing and possibly reducing social inequalities. Two priorities became evident with the pandemic crisis: the strengthening of public systems; and the accentuation of their universal nature [29]. The policy response to the dynamics of employment and unemployment will determine the evolution of inequalities in the near future [69]. In the second axis, the ambivalence of the digital transformation stands out. While digital devices have great potential in several areas, they can generate major threats to the ways of human existence in society. The attraction of a surveillance society for the sake of effectiveness in public action, particularly in crisis situations, with the use of permanent electronic surveillance of individuals, can configure technocratic authoritarianism. There is a concentration of data in a very limited number of digital companies in some states at the centre of the world-system. When the interests of the state and private interests in the use and control of information and communication technologies—as the potential technological basis

of totalitarianism—come together, the risks to democracy become very high [69]. Algorithms are imbued with prejudices and discriminatory criteria. A social stratification managed by digital means, directed by political-administrative hierarchies, is consolidated, with widespread social unequalled effects [29]. The third axis equates the utility, credibility and trust ascribed by the various “societies of individuals” to science and scientists in the production of knowledge and the definition of strategies to find solutions to the disease. The growing social visibility of science and its public communication may enhance the affirmation, simultaneously, of “scientific culture” as a citizen’s right and of a more reflexive conception of science, which has the purpose of critically analysing what it does, to assess the conditions in which it does it, as well as the effects of its activity [42]. The generalisation of the use of Information and Communication Technologies in scientific work shapes the ways of doing science and the emergence of new and wider modalities of science communication. One of the main changes is the breaking of communication linearity, replaced by an interactive network model, enabling higher levels of collaboration, internationalisation, transparency and impact of scientific work [87–89].

The observation that social interactions between individuals on global scale shape pandemics, a “global crisis”, a “global threat”, encourages reflection on the global nature of epidemics and, more broadly, health. A minimalist version assimilates “global” to “universal”, i.e., it reduces the phenomenon to a simple spatial extension; in the infectious field, it is the passage from the epidemic to the pandemic. Yet, if this is the favoured meaning, it would make little sense to replace “international health” with “global health”, as WHO did at the beginning of the 2000s, when its legitimacy was diminishing in the face of the rise of large private players [90]. Globalisation is not a homogeneous process: disease, medical response and social perception evolve in a differentiated way. Globalisation has less to do with extension than with interconnection; it has to do with networks of individuals, organisations, ideas and effects. In these networks, the mobility of individuals spreads the disease, the interactions between public and private institutions determine the response, and the relationships between the media and their audiences are part of the formation of perception, amplifying it or, conversely, reducing it, as is the case of some diseases, which, despite their high morbidity and mortality rates, no longer instigate panic and marked fear [90].

The social history of epidemics and the cultural studies on epidemiology, contagion and infectious diseases have highlighted a fundamental challenge facing the various Social Sciences: how to live together [91], what bonds us and what separates us. One of the most immediate effects in any epidemic outbreak is the material and symbolic exacerbation of social differentiation, the multiplication of the dividing lines between “us” and “the others”: between the healthy and the sick; between those who are well and those who are not; between those who have “previous pathologies” or are part of “risk groups” and those who promote “healthy” lifestyles; between those who have resources and support and those who do not; between “those who are inside” and “those who are outside”. These differences slide very easily into a social discourse towards a distinction between the “innocent” and the “guilty” [76,91,92].

Isolation has not only broken the regularity of social ties and connections in co-presence and physical proximity but is also generating a set of disruptive processes emerging from prolonged confinement [93]. In the long run, social isolation is associated with an increase in mortality of almost one third [94]. Prolonged periods of social isolation may have similar effects [24,95]. Individuals who are socio-economic disadvantaged or with poor physical or mental health are at higher risk [24]. There is no decent society that is based on the disconnection and interruption of social relationships, as well as on the drastic deepening of socio-economic vulnerabilities. This pandemic situation stands for an abnormality that cannot (should not) become the new normal. If this happens, it is the very notion of society that is at stake [93].

One of the most pressing challenges facing Social Sciences and Humanities in this ongoing crisis is to understand the extent to which the morality of our actions is determined by the value of their consequences. Dilemmas such as leaving a significant part of the population of a given country to contract the disease to develop collective immunity to prevent future epidemic outbreaks, or deciding who deserves to die or live in a context of a relative scarcity of resources (beds, masks and ventilators,

among others) are moral problems faced by the agents responsible for the medical and political management of the disease [96].

These situations, among socially relevant others, relate to the relevance of the fundamental contribution of Social Sciences, their knowledge and skills to the knowledge of these problem realities and to act in an informed manner, respecting democratic freedoms, human rights and the sense of social justice, and in containing and solving the problems posed in contemporary societies by this and future economic, social and health crises [29]. Table 2 presents some of the Social Science fields and their role in the management of the COVID-19 pandemic.

Table 2. Social Sciences in the management of the COVID-19 pandemic.

Psychology	Mental health consequences of social isolation; analysis of psychological resilience
Social Psychology	Social representations on the pandemic; attitudes towards risk; health attitudes and behaviours; assessment and intervention in adaptation to disease and health promotion; violence and social confinement; social ties and new forms of solidarity
Political Science	International governance and multilateralism; governance and public policy; political institutions, political attitudes and behaviour; public opinion and political communication; pandemics and nationalism
Economy	Dynamics of capitalism and pandemic; economy and health; structure of employment and unemployment; macroeconomic vulnerabilities; Lay-off; teleworking
Geography	Genesis and pandemic spread of SARS-Cov-2; metropolises, city networks and pandemic spread; migrations and pandemics
Demography	Demographic structure and prevalence of the disease; demographic vulnerability and COVID-19
Communication	Digital transformation, ICT and health surveillance; digital literacy; telemedicine and teleconsultation
International Relations	Articulation and/or competition between countries in fighting the pandemic
History	History of epidemics, pandemics and contagion; history and collective management of the disease and contagion
Anthropology	Cultural analysis of risk and contagion; processes of stigmatization of the “other”; cultures of fear; an ethnography of zoonoses
Sociology	Social order and crises; social inequalities in health; social construction of epidemic and contagious diseases; social space of health and collective management of disease and contagion; public health policies; social distance and confinement; science and scientific controversies

Source: Authors' own production.

6. Conclusions

A pandemic is a complex phenomenon as it is always a point of articulation between natural and social determinations. Its analysis is transversal: it is important to capture the points of intersection of the determinations and analyse their consequences. In this process, Social Sciences assume themselves as a scientific project centred on interdisciplinarity that favours a relationship of interdependence and complementarity between Social Sciences, in the theoretical and methodological plurality that seeks to articulate macro-social dynamics with local processes, allowing the connection of subjective meanings with practices, and that focuses on the articulations between systems and actors, between structures and practices, between the reality of social conditions of existence and the social construction of reality [97–100]. This enables the demystification of common knowledge shared in society, but which in reality is not correct [101,102]; and fosters sociological imagination [103].

The discourse space on the COVID-19 contagion–pandemic dyad can be understood as the expression of a coalition of discourses, i.e., the interaction of various discourses, combined in re-interpretative modalities of certain realities and social phenomena. The circumstantial coalitions of interests, which shape the different discursive records and actions produced by different agents of different social spaces (political, medical, scientific, economic and religious)—enable the acknowledgement and legitimisation of this pandemic threat and danger— and the promotion of its public management. They add to the definition and implementation of health policies, as well as to the promotion and development of institutional areas of a preventive nature, namely vaccination, health cordons, quarantine, isolation, social distancing, and intervening in the configuration of the collective management of disease and health.

In the case of pandemics, authors such as von Braun, Zamagni and Sorondo [104] argue that understanding the meanings of various social actions is critical in their management [20,105], with the development of specific measures for different social groups [39,40,77] and the possibility to counter the logics underlying the stigmatisation of the “other” [106]. In the COVID-19 pandemic, they imbricate: a new virus (SARS-CoV-2, with its own genetic characteristics); a human actor who is both the carrier of the pathogen and the diagnosed (or not) patient who brings out illness and sickness; an environment where nature (animal reservoir), humans and society interact; the knowledge of scientific medicine that is created at the same time as the virus replicates and the disease produces its effects, and legitimises public policies—a link that gives rise to an irreducible, inextricably biological, environmental and social relationship [107,108]. It is, therefore, important to promote an interdisciplinary scientific project characterised by the interdependence between the epidemiological, medical and biological knowledge and the knowledge produced by the Social and Human Sciences to better understand an economic, social and health crisis of such a huge scale and to shape the medical and political management of this and future epidemics and pandemics.

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