

# Market Configuration In The Human Health Sector: Pandemic Pressure As An Accelerator Of Innovation

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## **Abstract:**

**Background:** The Covid-19 pandemic has precipitated significant shifts within the human health market. The convergence of a sudden increase in demand for health services and the imperative for social distancing has led to rearrangements previously envisioned only as future possibilities yet materialized unexpectedly. This phenomenon elicits interest in understanding the transformative capabilities demonstrated in the years 2020 and 2021, which hold the potential for replication under various contingencies, regardless the pressure from critical factors. This paper endeavors to establish a dialogue between Market Construction and Practice Theory, scrutinizing the involvement of social actors who transformed practices during the pandemic.

**Materials and Methods:** This study employs a qualitative and descriptive methodology, leveraging a comprehensive review of literature pertaining to Market Construction, Practices, and the Health Market. This is further augmented by interviews conducted within Brazil, involving health service users, healthcare professionals, and stakeholders in the Brazilian health production sector. The selection of this research focus is warranted by two key considerations: a) historically, critical moments such as pandemics have catalyzed innovations yielding social benefits; and b) the diversity of social actors and their varying interests challenge the conventional economic logic dominating marketing strategy studies. This divergence opens new avenues for exploring the interplay between theoretical frameworks and practical research opportunities concerning market configuration or reconfiguration.

**Results:** The findings underscore that collaborative arrangements and public policies geared towards problem-solving have yielded economic and social benefits. These outcomes stem from the formulation of solutions coordinated among government entities, industry stakeholders, and academic institutions, indicating transformative capacities led by private initiatives and supported by public policies, rooted in pre-existing social structures and agents. Significantly, these findings contribute to the field of marketing management by providing insights into the transition between practices of exchange, representation, and regulation, moving beyond the traditional view of marketing as merely instrumental. This expands our understanding of marketing's role in facilitating not only economic transactions but also in shaping social interactions and regulatory frameworks, thereby offering a more nuanced view of market construction and the dynamics of social change.

**Conclusion:** This research enriches the theoretical landscape by elucidating how market formation is influenced by transformative capacities, grounded in established structures and agents. It highlights the essential role of stakeholder integration, facilitated by public policies, in fostering economic and social advantages in the health sector. Through a blend of theoretical analysis and empirical evidence from interviews, the study underscores the dynamic interplay between market configuration and social practices, advocating for a collaborative approach to enhance both public and private health outcomes.

**Key Word:** Market Construction, Practice Theory, Human Health, Telemedicine, Covid-19 Pandemic.

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Date of Submission: 13-03-2024

Date of Acceptance: 23-03-2024

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## I. Introduction

On March 11th, 2020, the World Health Organization -WHO, declared the outbreak of the Covid-19 virus a global pandemic, and only in May 2023, the same organization announced the end of the global emergency. By May 3rd, 2023, a total of 765,222,932 cases of contamination had been recorded worldwide, with 6,921,614 fatal cases, or 0.9% of deaths relative to the total number of contaminations<sup>47</sup>. The pandemic caused by the virus was, inexorably, an event of extreme severity due to the high mortality rate of the disease. This fact directed society towards collaborative emergency actions for its reduction and control. A widely employed action from its onset was the distancing of people in general, due to the risk of contamination, including and with significant relevance, in the human health sector, prompting changes in social care practices and in the commercialization of health products.

The phenomenon of innovation emergence occurred with the pandemic, transforming practices in markets. There have been many pandemics, with alarming amounts of contamination and deaths, producing new

learnings, since society has come to have more science, better practices, and more health products to deal with the lethality of diseases. To exemplify the construction or transformation of markets in the face of pandemic severity, we can mention: vaccines, development of medications, changes in health monitoring practices with the use of technology, changes in the guidance for society to carry out disease prevention, and greater global scientific exchange of science and health products<sup>44</sup>.

Thus, practices arising from contingencies provoke arrangements of social practices that corroborate the concept of market constructivism. Considering the economic representativeness of the health market, economic calculability is clearly employed<sup>6</sup>, and framing occurs, or overflow of practices important to be understood. In this interim, the representativeness of the actors' arrangements in social practices leads to normalization for the insertion of practices into the market and society. It is important to highlight that health expenditures represent approximately 10% of the global GDP<sup>43</sup>, reinforcing the relevance of the topic.

According to data from the Brazilian Institute of Geography and Statistics - IBGE, by the year 2060, approximately 25% of the Brazilian population will be over 65 years old. For comparison, in 2018, this proportion was 9.2% of the population<sup>16</sup>. The aging of the population is a positive fact, but it will demand more health care, which determines the importance of verifying the elements of acceleration of innovation and marketization of health for greater efficiency and effectiveness of the systems, not only in terms of calculability of value generation for the health industry but also in terms of social benefits. In this way, an attempt will be made to move increasingly towards a process of rationalization for a health service.

Market Construction has been brought to this work because it is a conception that promotes new possibilities of understanding about the marketization of products and services<sup>18</sup>. Such transformations in the market scene are articulated with equally rapid transformations in the field of technology in drugs, treatment protocols, and remote service delivery apparatuses. This phenomenon offers depth and relevant insights in understanding market formation, as they go beyond the dominant academic view of marketing, defined in part as "the science, art, and practice of exchange"<sup>1</sup>. Market formation is a theme that has been associated with the idea of collective outcomes of individual actions that date back to the tradition of classical economics of Adam Smith.

According to Kjellberg and Helgesson, to understand how markets are formed, how marketing interacts in new ventures, and the consequences of different market formatting processes in our economy, it is necessary to go beyond the economic-financial focus, expanding the discussion to a practice-based perspective, which deals with multiple theoretical influences that may compose the market formation process<sup>19</sup>. "Social reality is a continuous process of creation"<sup>18</sup>, where the emergent nature of reality that is constantly being materially, socially formed, and where actants take part, is emphasized.

The organizational arrangements that enact markets are composed of practices with complex forms of coordination among the social actors involved. Thus, markets are environments with diverse and conflicting sets of practices, which is why attention must be directed toward the market forms resulting from the efforts employed in their formatting<sup>19</sup>. It is in this sense that constructivism emerges as a theoretical lens defining how markets are configured by practices dependent on the elements that integrate them, whether human or non-human, referred to as actants. Actants carry out social practices, not focusing exclusively on human beings but also on tangible or intangible things that form networks with the establishment of practices, with their various meanings. In this process carried out by actants, a translation between practices occurs. The concept of translation means moving goals, interests, devices, human beings, and providing a geometric meaning of transposing from one place to another. The constant processes of transporting meanings among actants are called "translation chains," socio-material assemblies that stabilize a social reality<sup>20</sup>.

Marketization can incorporate Market Construction in its analyses, where actors operate according to their constitution from practices, namely: Representation; Normative (or regulatory); Exchange (or transaction)<sup>18</sup>. The continuous process of translation among social practices determines the socio-material aggregates that stabilize a social reality<sup>21</sup>. When translation occurs, it becomes possible to identify the phenomenon of performativity and the generation of multiple market versions<sup>19</sup>.

It is the translation chains that shape markets, where market practices are the activities that constitute it. These practices are subdivided into three groups, characterized as: transaction or exchange practices; representational practices, and normative practices. Transaction practices refer to activities involving the economic exchange of goods and services between suppliers and consumers. Representational practices refer to the information produced that influences market performance. Normative exchanges contribute to the establishment of rules and guidelines on market formatting, according to the interest of a particular actor or group<sup>18</sup>.

This research started from two questions: i) How does the acceleration in the construction of new markets in the human health area occur, because of the recent pandemic pressure on social practices? ii) Once the elements of acceleration in the market configuration or reconfiguration are identified, which transformative factors can be relevant and applicable in other contingencies, regardless of the pressure exerted by a critical event? The theories

proposed for analysis are related to Market Construction and Practice Theory, aiming to establish an analytical proposal for scientific investigation that covers the market arrangements in the health area.

## II. Material And Methods

This study was conducted based on publications related to theories on Market Construction, Practice Theory, and changes in the health market, starting from the observation of the phenomenon of configuration and reconfiguration of this market during the Covid-19 pandemic in the years 2020 and 2021, and was complemented by 30 semi-structured interviews.

**Study Design:** Qualitative research of a descriptive nature.

**Study Location:** Brazil, with many participants residing in the southern region of the country.

**Study Duration:** Research conducted from 2021 to 2023, with interviews carried out between September 28, 2022, and January 30, 2023, totaling almost 24 hours of recordings.

**Sample Size:** Not applicable.

**Sample Size Calculation:** Not applicable.

**Subjects & Selection Method:** After researching the available literature on the theories and on recent changes in the health market, interviews were conducted with division into 3 groups of respondents, representing the social actors of the phenomenon under study, being these the health professionals – M; patients – P; and members of the administration, promotion, and health industry – A.

**Procedure Methodology:** The study involved interviews of individuals active during the observed phenomenon, specifically the acceleration and modification of health practices during the pandemic. These modifications, in part, correlate with an increased utilization of technology, signaling a notable acceleration since the onset of the pandemic. This investigation was bolstered by review of related literature, encompassing both foundational texts from the authors of the applied theories and pertinent articles, mostly from PUBMED. Additionally, interviews were conducted to further enrich our understanding and insights into the phenomenon, providing a comprehensive exploration of the transformative dynamics within the health market during this unprecedented period.

### Market Construction:

Health consumption is translated into the purchase of goods and services, presenting complex market structures that critically influence medical care patterns. Regarding health supply, profit is not the motive to explain the existence of this market, as occurs with other types of goods and services. It is observed that many non-profit institutions are providing health services, as is the case with the Brazilian public state system, which guarantees rights to the consumption of these services for those who cannot use supplemental health services. This detail complicates the market analysis from the viewpoint of choice rationality by users of the products. Moreover, it is generally an unpredictable consumption that occurs in a situation of emotional and psychological appeal, so that, the one who will determine the use of products in health will not be the patient, but the health professional who makes the diagnosis<sup>48</sup>.

The growth perspectives of the health market led to reforms in health systems with investments in the area, so that the incorporation of new technologies leads to the adoption of new practices and innovation possibilities, with increasing acceptance by doctors and patients. This leads to the construction of promising markets, even if it is simply for health monitoring<sup>25</sup>. Social constructivism means that we replace what reality is made of with another material, which is the social. Social refers to association, to the idea of a construction made of social matter, which disappears. Thus, for a construction to occur, "human entities must play a larger role, where attention is turned to the heterogeneous realities that enter the manufacture of a certain state of things"<sup>20</sup>.

The markets undergoing transformation during the pandemic demonstrated an acceleration of technology use in health, where, for example, the increased use of telemedicine was observed. The terms telemedicine, telehealth, or e-Health are used to designate activities that employ information and communication technologies in health care. Interestingly, in 1997, telemedicine was already present in the research of the University of São Paulo<sup>37</sup>, and, in a fragmented manner, telemedicine emerged in Brazil in the late 1980s in university research centers, with the perspective of contributing to the expansion of access to quality health care, regardless of the patient's location, a topic relevant to the Brazilian extensive unified health system, named as SUS<sup>41</sup>. These observations lead us to inquire about the factors of the rapid transformation of telemedicine practices in the construction and transformation of markets in the years 2020 and 2021, when they had already been research topics for four decades.

Markets and marketing are connected from both, theoretical and practical viewpoints, with marketing being an activity and a process in the context of markets, in their performance and formation, which are constantly developing<sup>27</sup>. Markets are the results of organizational efforts, in a constant process of "doing" more than "finished products" and are built as ingenious achievements from the sociotechnical arrangements necessary to build their different forms. The reconnection of marketing to markets<sup>19</sup> means recognizing the work performed, not only by

traditional economic agents but also by all those professionals who, to a greater or lesser coordinated action, with the most diverse ambitions and objectives, imagine and transform what was called sociotechnical agency.

Telemedicine has been applied in studies, research, and experiments in recent decades, so that its components participated as intermediaries in health care in 2020 and 2021, causing rapid movement in exchange practices, as well as generating the calculability of its application and its marketization, which was supported by the rapid movement of normalization of practices incorporated in the activities of health professionals, also carried out more quickly. With the pandemic, the protagonism of social actors in their network formations was observed, which provided the emergence of radical, disruptive, or incremental innovations, necessary to allow the continuity of health care, even with distancing<sup>14</sup>, thus characterizing an overflow of practice.

Economic exchanges are subject to different efforts, such as those from authorities, sellers, buyers, NGOs, etc., which are often visible, articulated, and contested, suggesting that markets are characterized by multiplicity, where the outcome of framing efforts is always fragile, partial, and temporary<sup>18</sup>. Calculability, or calculation strategy<sup>7</sup>, refers to the continuous work of framing, which is the fixation of relations among entities around an economic transaction, contractual or by agreement. Making a product calculable defines its properties objectively, so that it can integrate into the consumer world<sup>6</sup>. According to Araújo (2004), accounting provides calculation elements that allow market actants to use money as a medium of exchange, determine costs, and make investments, facilitating the creation of market assets for their investors.

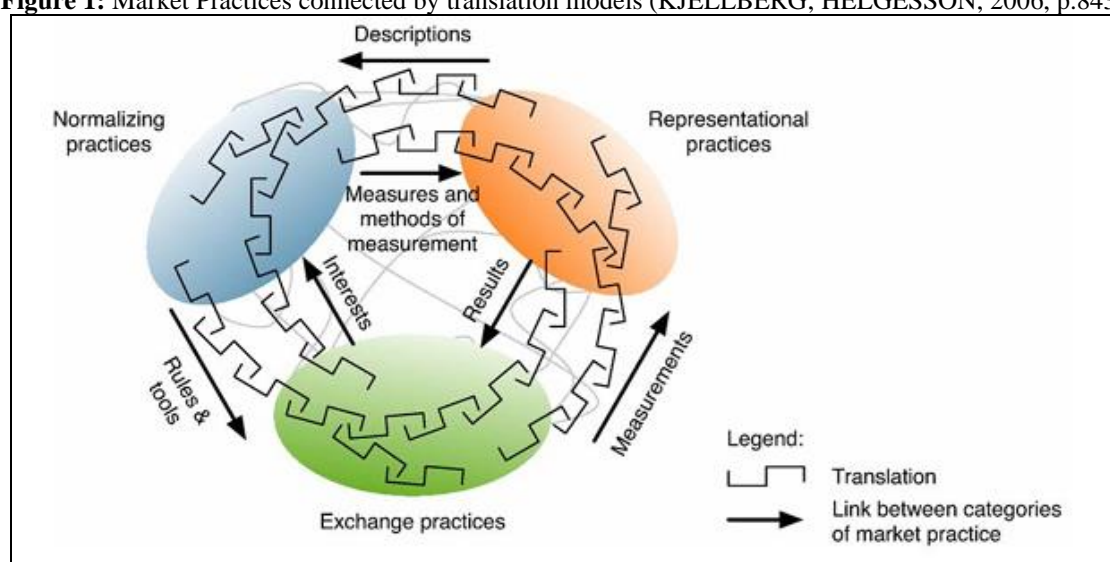
### **The Social Practices:**

According to Market Construction assumptions about the construction of a market are distributed across five distinct points: i) that markets are formed by interrelated social agents; ii) markets are formed through regulations; iii) markets are formed by competition; iv) market creation involves contracts; and v) market creation involves entrepreneurial action and innovation. From this observation, Market Construction has incorporated into their analyses the market in which actors operate according to their constitution from practices named: Representation; Regulation; Transaction<sup>19</sup>. The idea that is part of the market formatting goes through these three types of practices. It is the exchanges of practices that allow the continuous evolution of ideas. The concepts of ideas, practices, and transformation of markets have added an important perspective to the focus on Economics and Finance, which were the basis of market transformation studies<sup>18</sup>. In this context, one of the main tasks in the study of marketization is to identify the forces that participate in the networks and understand how they relate<sup>6</sup>.

In terms of innovation, although normative practices signify the basis for the existence of a market, by guiding the actions of the actants, the consolidation and dissemination of a market only becomes possible with representation practices and exchange practices. Regulation or normative practices, refer to activities that contribute to the establishment of guidelines and directives for market operation, according to the interests of a particular actant or group. Representation practices involve activities that enable the portrayal of a market and its recognition, which will define its operation. In summary, exchange or transaction practices are activities aimed at maintaining the market, including the economic, social aspects, and power disputes in the market in question<sup>5</sup>.

In the interaction of networked actants, social reality is both more abstract and more empirical, considering the endowment of agency to non-human actants in the action of transporting meanings, not arising from a motive, a cause, but by the action of induction to social facts, where they act as mediators<sup>21</sup>. Thus, transformations occur, which the author calls translation, where the network emerges as what is "traced" by the translations. At this point, the author concludes that there is no society, there is no social domain, nor are there social ties, but rather, translations between mediators that can generate traceable associations.

It is important to highlight that the three types of practices have translations, or rather, translations among them, so that normative practices affect exchange practices and representational practices; exchange practices affect normative and representational practices; representational practices affect normative practices and exchange practices<sup>19</sup>, as occurred with the approval of telemedicine tools during the pandemic, opening market opportunities and changing medical service transaction practices, or the rapid regulations for regulation and applicability of telemedicine in the pandemic period. This interaction is demonstrated in Figure 1.

**Figure 1:** Market Practices connected by translation models (KJELLBERG; HELGESSON, 2006, p.843.)**Framing and overflow of practices:**

Economic exchanges are marked by the production of framings and overflows, which depend on a variety of practices that construct spaces of calculability, where actants calculate their choices. The framing of a practice encompasses the delimitation of the interactions of actants<sup>8</sup>, whether human or artifacts, to prevent a certain practice from overflowing into external interactions, serving as a connection device. It is a process of stabilization of market arrangements, allowing the relations in a network to be captured and dissociated from each other. It is in the framing that the limits of interactions are established, regardless of their context<sup>37</sup>. In contrast to framing, overflow refers to an economic transaction that involves more entities, defined as "economic outsiders," who are incorporated in the creation or modification of the market<sup>18</sup>.

According to Callon (1998a), entities and their relations emerge as economic actants engage in the work of accounting for their relationships with other actants in the market and adds, "without overflows, the whole framing process would be totally ineffective." Overflow constitutes one of the central issues for understanding the success or failure of a market interaction, causing modifications in the framings of practices that had been previously established<sup>6</sup>. Overflow is the result of imperfections or the failure of framing attempts. Moments of overflow determine the emergence of imperfections in the framings that reveal material, legal, or other framing devices, which motivate debates about their possible improvements<sup>37</sup>. The framing of a practice will always be susceptible to contests and substitutions provoked by another framing<sup>2</sup>.

**Marketization and Calculability:**

Marketization is a set of efforts aimed at describing, analyzing, and understanding the format, constitution, and dynamics of the market's sociotechnical arrangement. This formation creates a powerful path for comprehending how policy changes designed to reconstruct social and political relations are implemented, in accordance with market principles<sup>27</sup>. It is worth noting that in strategic health management, four factors should be observed for their interdependence relationships, which are: health operations, providing the necessary products and services; financing and intermediation; health information; and health technology<sup>34</sup>. According to Callon (1998a), the market economy does not function as argued by orthodox economists, in defense of the idea that market equilibrium depends on automatic adjustments between supply and demand. Historians and sociologists have tried to demonstrate that supply and demand are socially constructed, making managerial practices conform to what emerges from the market.

Calculability, or calculation strategy<sup>7</sup>, relates to the continuous work of framing, which is the fixation of relations among entities around an economic, contractual, or by-agreement transaction. Making a product calculable defines its properties objectively, so it can integrate into the consumer world<sup>6</sup>. According to Araújo (2004), accounting provides calculation elements that allow market actants to use money as a medium of exchange, determine costs, and make investments, facilitating the creation of market assets for their investors. The calculation of value is based on the triad of 'quantitative calculation', 'qualitative calculation', and 'collective calculation', where quantitative calculation refers to the economic price of the product; qualitative calculation refers to the material properties, metrics, and judgments incorporated in the valuation process; and collective calculation, in turn, refers to the social connections integrated into the product's value calculation<sup>9</sup>.

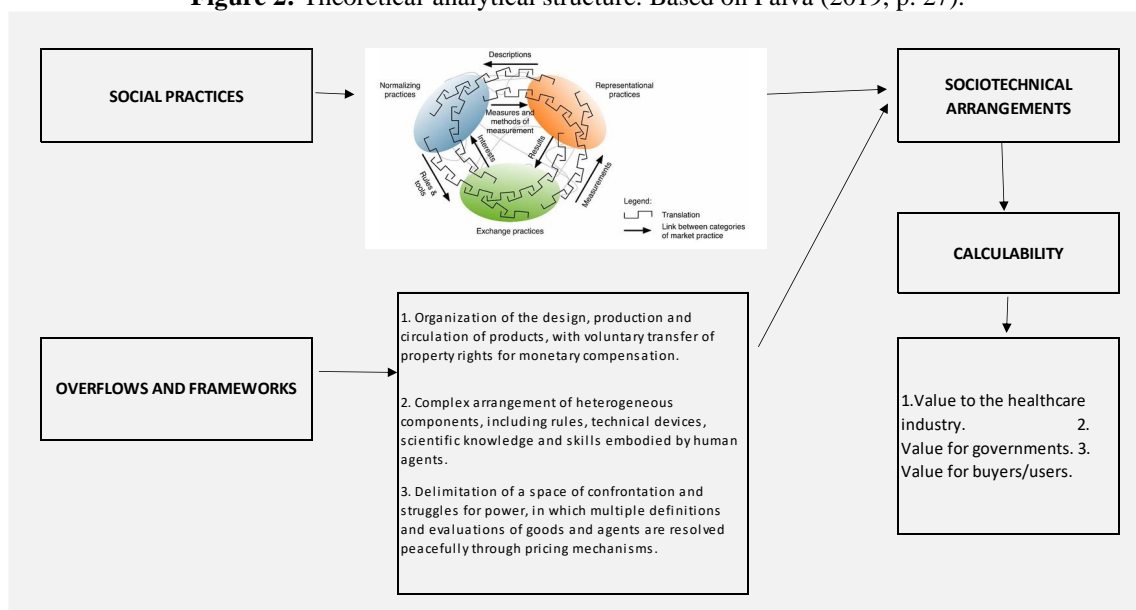
It is important to highlight that the costs of public and private systems in Brazil corroborate the importance of the topic and the search for more efficient, effective, and comprehensive alternatives for the use of new health products. According to the Ministry of Health, Brazil still has a model focused on curative care, with lower volumes of financing directed to long-term care and rehabilitation, areas pressured by population aging, which will be even more demanded for long-term care post-Covid-19. Curative care represented, on average, 49.8%, practically half of health expenditures between 2015 and 2019, followed by 20.5% on medication and medical articles, and 11.3% on complementary exams. These three expense groups represented 81.5% of the total, with a smaller participation in prevention, health promotion, and surveillance, as well as in long-term care and rehabilitation<sup>28</sup>.

This research highlighted that pre-existing actants, performing collectively established habitual practices, collaboratively and emergently engaged with the use of new devices that quickly changed practices, modifying the pre-existing health care structure, as seen with the use of telemedicine, to cite just one example that had a significant impact. However, there is an unease to be investigated: Has the social pressure derived from the pandemic been altering the health market and the way health care is provided? In this approach to the construction of new markets, we cannot fail to consider the various entities that act and pragmatically determine the economic calculations involved in forming consumer behavior.

According to Cochoy (2016), participants seek to develop democratic and technical procedures that must collaborate in socially, morally, and politically acceptable combinations, that is, being concerned with the various entities involved in social life, without, however, failing to consider economic negotiations. The notion of networked actants and their arrangements for sociotechnical transformation also includes the experience not only of consumers but also extends to friends, relatives; professionals like sales and marketing; suppliers of raw materials to packaging; the use of artifacts; communication technologies, each actant playing its distinct and well-defined role, making the success of a consumption experience depend on the successful articulation of all actants that constitute this network.

In this context of interaction of networked actants, we must consider the transition arenas of social practices, where changes occur and where interactional consensus is relevant in the processes of strategy formulation and decision-making. Consensus is a decision-making process without explicit voting, following a logic of consent, where not all participants express preferences, so the distribution of preferences remains unknown. The decision made is no longer contested, due to the absence of contestation. The decision will remain as that of the group, where everyone joins what was accepted<sup>15</sup>. In summary, Market Construction and Practice Theory applied are summarized in the following figure:

**Figure 2:** Theoretical-analytical structure. Based on Paiva (2019, p. 27).



**Procedure for conducting semi-structured interviews:**

To conduct the semi-structured interviews, the research work followed with the establishment of three groups of respondents to address questions about their experiences and perceptions during the pandemic. The material was transcribed from nearly 24 hours of recording, as outlined in the following table:

**Table 1: Interviewees**

ID	Occupation of the interviewee	Approximate time profession (years)	Health system	Gender	Location at the time of the interview	Interview method	Interview time
M1	Pharmaceutical	15	Private	Feminine	Curitiba - PR - Brazil	In person	00:29:36
M2	Digestive system surgeon, professor	20	Private	Masculine	Curitiba - PR - Brazil	In person	00:50:02
M3	Gynecologist and Obstetrician	40	Public and private	Masculine	Curitiba - PR - Brazil	In person	00:47:22
M4	Endocrinologist	15	Public and private	Feminine	Curitiba - PR - Brazil	In person	00:28:11
M5	Dermatologist	25	Private	Feminine	Curitiba - PR - Brazil	In person	00:26:07
M6	Health technique	2	Private	Feminine	Curitiba - PR - Brazil	In person	00:50:28
M7	Neurosurgeon	20	Private	Masculine	Curitiba - PR - Brazil	In person	01:06:07
M8	Medical clinic and general and vascular surgery - NGO	40	Public and private	Masculine	Amazon region - Brazil	Remote via Zoom	00:45:01
M9	Gastroenterologist and Hepatologist	40	Public and private	Masculine	Avaré - SP - Brazil	Remote via WhatsApp	00:27:11
M10	General surgery	1	Public and private	Feminine	New York - USA	Remote via Zoom	00:42:37
P1	Trade Representative	50	Public	Masculine	Curitiba - PR - Brazil	In person	00:34:03
P2	Advertising	25	Private	Feminine	Curitiba - PR - Brazil	In person	00:49:01
P3	Volunteer at an NGO in Ukraine	1	Public and private	Masculine	Ukraine	Remote via Zoom	00:19:54
P4	Consultancy in Markets and Marketing	10	Public	Feminine	Santos - SP - Brazil	Remote via Zoom	01:19:09
P5	University professor	6	Public and private	Feminine	Curitiba - PR - Brazil	In person	00:56:27
P6	Retired civil servant	50	Public and private	Feminine	Curitiba - PR - Brazil	In person	01:15:36
P7	Business manager and consultant	50	Private	Masculine	Curitiba - PR - Brazil	Remote via Zoom	00:58:59
P8	Entrepreneur in the mechanical field	50	Private	Masculine	Sao Paulo-SP - Brazil	Remote via Zoom	00:51:34
P9	College professor	10	Private	Masculine	Curitiba - PR - Brazil	Remote via Zoom	00:39:36
P10	Residential condominium caretaker	30	Public	Feminine	Curitiba - PR - Brazil	In person	00:26:06
P11	Counter	40	Public and private	Masculine	Curitiba - PR - Brazil	In person	00:27:35
A1	Director of Science, Technology and Innovation	25	Private	Masculine	Curitiba - PR - Brazil	In person	00:31:41
A2	Programmer and IT Analyst	22	Private	Masculine	Piracicaba - SP - Brazil	Remote via Zoom	00:37:15
A3	Pharmaceutical laboratory propagandist	25	Private	Masculine	Sao Paulo-SP - Brazil	Remote via Zoom	01:08:55
A4	Pediatrician and CEO of health innovation company	35	Private	Masculine	Curitiba - PR - Brazil	Remote via Teams	00:44:25
A5	Incubator ADM advisor: Supera Parque	5	Public and private	Masculine	Ribeirão Preto - SP - Brazil	In person	00:53:14
A6	Pediatrician and advisor to CRM do Paraná	50	Public and private	Masculine	Curitiba - PR - Brazil	In person	01:25:32
A7	Vice Governor of PR/President Fecomércio	40	Public and private	Masculine	Curitiba - PR - Brazil	In person	00:47:35
A9	Electrical Engineer and R&D Manager Lactec	20	Private	Masculine	Curitiba - PR - Brazil	Remote by Teams	01:07:50
A10	Health operator manager Unimed PR	20	Private	Masculine	Curitiba - PR - Brazil	Remote by Teams	00:58:00
30	Recorded interviews			F = 10 M = 20		Total in hours	23:45:09
						Average per interview	00:47:29

The information analysis that formed the textual corpus of the interviews, conducted with the assistance of the system Atlas.ti for qualitative research, highlighted the elements of practice translations that are synthesized here. The "M" group refers to health professionals, who demonstrated proactivity and adaptability, especially those closer to the specific problem of the pandemic. In other areas of service, those with more time in the profession showed some problems with technological adaptation and acceptance of remote care, when possible.

In the "P" group of patients, a passive behavior of acceptance and adaptability to the imposed changes was observed, as in the adoption of technology in the intermediation of services. The use of technology highlighted acceptance and proved beneficial for cases of distance problems between patient and health professional, demonstrating its importance in saving time, resources, and solving mobility difficulties.

In the "A" group of Administration, it is possible to verify greater movement towards taking advantage of market opportunities for profitability, as well as emerging opportunities for developments with investments, with the issue of bureaucracy in project analysis with effective application of resources available in governmental programs being strongly pointed out. In summary, in the intertwining of practices, the need for greater attention in public policies became evident, not only for financial intermediation in development, production, and approval of health products but also in the integration of health professionals in projects at universities, startups, and industries developing solutions, whether for correcting problems, monitoring, or preventing health issues.

### III.Result

The overflows in the practices become evident with the emergence of significant technologies, or their modifications, which emerge from high social impact events, such as the pandemics. New technologies and modifications in social practices are adapted and incorporated into the market and everyday life. The recent pandemic has led to the convergence of innovation in digital health services, which do not replace current health systems and still have limitations. However, due to the severity of exposure to COVID-19, patients, and health professionals, in a short span of time, opted for emergency solutions, such as telemedicine. This method, facilitated by digital communication for consultation, monitoring, and even surgical procedures, represents a clear example of how sociotechnical changes can rapidly alter market dynamics and practices<sup>36</sup>.



### **Acceleration of practices in the healthcare market:**

Amidst the crisis, with many patients, limited resources, and extreme severity of injuries, riskier practices benefited the experiments, with successes and failures that started as techniques used militarily and later became civilian practices<sup>30</sup>. There have been many pandemics, with alarming amounts of contamination and deaths. Citing more recent cases, in the Spanish Flu of 1918-1919, the disease infected about 500 million people, killing more than 25 million<sup>44</sup>. It is important to remember that the world had less than 2 billion inhabitants at the beginning of the 20th century. In 1968, the Hong Kong Flu spread worldwide and killed 1 million people. In 1981, HIV emerged in Africa and spread across the planet, causing more than 35 million people to die from problems related to acquired immunodeficiency syndrome (AIDS). More recently, in 2009, a new variation of influenza, called Swine Flu, with the first cases detected in Mexico, spread to other continents with deaths of 203 thousand people worldwide.

From the Spanish Flu to Covid-19, with a century difference, society has more science, better practices, and more products to deal with the lethality of the disease. To exemplify evolutions in the health market stemming from pandemics, we can mention some, such as vaccines, development of medications, changes in health monitoring practices with the use of technology, changes in guidance for disease prevention in society, with greater global scientific exchange of science and health products<sup>44</sup>.

Social practices in health are incorporated into governmental policy. According to Schatzki (2002, p. 267), "politics is the intentional and collective effort to manage a social sector in general". The author suggests that human achievements depend partly on the success and failure of governmental policy. It is impossible to imagine social life without politics, making politics a set of practices linked to diverse and complex orders, performing a truly prodigious task. In providing public goods to society, different governance approaches often overlook local political realities and the arrangements formed by various actors, their management models, and control instruments in public-private management. However, since the 1990s, new actors were integrated with the logic of "managed competition" for health services provision. Incentive mechanisms emerged to meet, even if partially, the interests of groups within the health sector. The growth of private interests' influence in determining the provision of public goods is evident, with new participants and new social practices, with social interaction in which health policy materializes and unfolds into public actions<sup>38</sup>.

Access to health depends on public support policies, where governments can facilitate access to health, such as the inclusion of products in essential drug lists, treatment guides, reimbursement programs, or subsidized health, with security in distribution systems to pharmacies and health institutions. Regarding the legal use of products, research by Murphy et al. (2021) indicates that studies are needed to understand the systemic barriers to access to medications, such as patents. Even with a WHO – World Health Organization list of essential medicines, comprehensive global collaboration is required that aims at methods that enable co-creation of interventions at the local health system level, considering legal issues related to research, at the levels of incorporation of medications into guidelines. This will require greater commitment from global actors, working in partnerships of national multilateral health organizations together with governments<sup>29</sup>.

### **Indications of market configuration and reconfiguration due to pandemic pressure:**

With the pandemic, the practices of exchange and representativeness with telemedicine demonstrated their benefits, thus being accelerated in terms of normative practices, promoting a rapid increase in the use of consultations for disease monitoring. Patients with heart failure who received preliminary ambulatory follow-up in person or even via telemedicine showed better results than those who did not receive any follow-up<sup>45</sup>. Early in the pandemic, global investments in the health market for research, production, distribution, and application of vaccines demonstrated the capacity for collaborative actions aimed at treating other diseases with health care issues. The global mobilization of resources, including financial investments, political decisions, and legal definitions to address the urgency of the pandemic, is notable and unprecedented, indicating the possibility of expansion to other contingencies<sup>29</sup>.

According to Schatzki (2002, p. 267), "politics is the intentional and collective effort to manage a social sector in general." It is impossible to imagine social life without politics, making politics a set of practices linked to diverse and complex orders. Therefore, it's important to highlight that social practices in health are incorporated into governmental policy, and this sociotechnical movement also demonstrated the capacity for executing more agile processes during the pandemic.

Telemedicine as a technological mediator in healthcare is expected to contribute to better management of health resources, thereby improving outcomes for individuals and public health through increased efficiency of health investment funds. On a broader scale and under exceptional conditions, telemedicine can enhance communication between doctors and patients, promoting therapeutic adherence and reducing medication-related issues diagnosed. The reduction in the costs of disease investigation and diagnosis time will result from the efficiency of transmitting information remotely in digital format from key structural units, such as imaging services, laboratory services, and pharmacy products, which will also lead to reduced human resource costs<sup>12</sup>.

Advancements in digital technology in the healthcare sector are radically changing how patients and individuals looking to maintain their well-being can benefit from these technological means. Technological resources can help



improve health systems after evaluating certain factors such as their benefits, harms, acceptance, feasibility, resource use, and considerations regarding the patient-health professional relationship. As a science, medicine treats the human being in their physical, social, and emotional aspects. However, each patient has unique needs that go beyond attention to physical healing, requiring individualized care to meet their needs and expectations, where communication is an indispensable and utmost important factor in the care process. With the advent of globalization, communication has advanced, promoting the ease of assistance from technological devices, which has expanded access to goods and services, especially for professionals who needed to interact with people daily, such as in the healthcare sector, where the complicating element of distance still exists. Thus, the use of media has opened new possibilities by breaking down barriers, bringing patients and healthcare professionals closer<sup>25</sup>.

#### **IV. Discussion**

The assumptions of market constructivism, as identified by Paiva (2016, p.10), were evident in this research. i) The first is that markets are formed by interrelated social components. This assumption is confirmed by the translations between practices of different types of actants and the three different groups of respondents. ii) Markets are formed by regulations and the behavior of agents. This assumption was also observed in the translations between practices, such as the generation of regulations that allowed the continuity and evolution of remote care practices. iii) Markets are formed by the competition among agents. This assumption is perceived in the intensification of actions between the industry, innovation institutions, and universities in the pursuit of opportunities to participate in an evolving market. iv) Market creation involves contracts between agents. This was observed in the relationships between governmental agents and the industry, both through the investments made and the actions between regulatory agencies and health agents, to name a few examples. Lastly, the 5th and final assumption is v) market creation involves entrepreneurial action and innovation. This assumption is demonstrated in the translations of practices that resulted in new goods and services in health, with the acceleration of investment and innovation that the pandemic required to reduce contaminations and facilitate the provision of services.

The observation of the importance of practice overflows was relevant when the interactions of actants, reacting to external pressures, caused the de-framing of pre-established structures with consequent overflows and re-framings<sup>6</sup>. These practice overflows, in the case of accelerated reactions to contain the pandemic, are indicative of the benefits of de-framings with adaptive rearrangements. Citing only a few examples of overflows, consider the adoption of teleconsultations, electronic prescriptions, emergency regulations, increased investments in innovations, and the adaptation of patients to a new process of remote care, where possible.

It was also observed that pre-existing structures enable innovations, and within these structures, actants modify practices in their translations, configuring or reconfiguring the actants and new practices. It is not necessary to have external pressure for innovations, but it is necessary for the translations to occur in a different dynamic. Traceable history indicates paths to innovation without necessarily having external pressure. The findings showed that this dynamic should consider public policies more connected with organizations, as these organizations already work on innovations but face difficulties regarding governmental support and connection with companies and universities, both in terms of coordination of integrated actions and financially. It is important to highlight that the participation of healthcare professionals in the innovation processes results in an acceleration of the implementation of new solutions. This coordination and funding more focused on health innovations can transform the market to make it more efficient, comprehensive, and inclusive for both the public and private sectors, benefiting its main interested party, which is the consumer of health products, society itself.

Approaches to telemedicine, with emphasis on teleconsultations, online pharmacy, and teleconsultations among doctors, show that the pandemic moment was partly aided using technological means, making it clear that the technologies applied until then were not sufficiently ready for the urgency imposed by the pandemic. This is the case with 4G communication technology, pointed out as insufficient for the growing traffic of digital information, demanding attention for investments in 5G technology and greater data storage capacity in the cloud. Cloud computing is cited as an element that allows the use of applications embedded in many business processes, reducing complexity instead of just saving costs, and enabling greater integration, mobility, flexibility, and scalability of infrastructure, thus meeting business demand and market requirements<sup>46</sup>.

Observing the phenomenon of acceleration in the reconfiguration of the health market, the social practices were considered along with the impact of digital transformation, which initiated an "extensive, abrupt, and dramatic transformation in society"<sup>17</sup>, considering the historic and exceptional lockdown, which revealed the fragility and immaturity of organizations, bringing to society the important observation that Covid-19 made digital transformation mandatory for all businesses in all sectors<sup>11</sup>. During the lockdown, the resilience capacity of patients and health professionals was present, as they needed technical support or did not have adequate and secure hardware for routine activities, representing a challenge in the management of information technology – IT<sup>33</sup>. Thus, digital platforms became an important means for enterprises to stay connected<sup>35</sup>.

## **V. Conclusion**

The conclusions drawn from the literature research, organizational data, and interview reports allowed for the observation of an emerging perspective with the following evidence of transformative capacities to be considered in marketing strategies:

- Modifications of practices are based on pre-existing structures where framings and overflows of social practices occur.
- Actors participating in transformations come from pre-existing actants, strongly represented by technological actants.
- Translations of practices among government, industry, and universities drive investments in innovations (calculability).
- Public policies have the power to accelerate sociotechnical arrangements for the economically interesting production of goods or services, with a greater focus on prevention and health monitoring, which goes beyond the focus on curing.
- The participation of medical professionals in innovation drives practices oriented towards management with efficiency, effectiveness, and scope.
- Normative practices accelerate the feasibility of using new products in digital transformation.
- The public and private systems mutually benefit when there is coordination of actions aimed at integrating stakeholders and fostering support.

These insights highlight the importance of integrating various actors and sectors in developing and implementing effective health marketing strategies. They underscore the significance of sociotechnical arrangements, the pivotal role of technology and innovation, and the critical impact of public policies in shaping the health market landscape, particularly in times of rapid change and crisis.

Regardless of the COVID-19 virus or any other event of this gravity that may arise in the future, we propose a deeper study of the phenomenon of acceleration in market formation, aiming to understand the replicable elements of this acceleration, considering that such transformations impact health markets, not only during pandemics but also in other social contingencies. Therefore, it is essential to understand how the articulation of social practices establishes comprehension, meanings, and intelligibility, the latter articulated by specifying what makes sense to the actants<sup>39</sup>.

In Market Construction, markets are formed by practices that influence the framing of these markets where social reality is a continuous process of creation, emphasizing the emergence of reality that is constantly being materially and socially formatted<sup>18</sup>, transforming into a joint optimization for a certain technical achievement that improves the quality of life in society<sup>23</sup>.

This work was based on Market Construction and Practice Theory, where an analysis was conducted that goes beyond the instrumental practice of marketing, observing the practices of marketization. It was considered here that the transition cycle of an innovation can be long, 25 to 50 years<sup>24</sup>, making it essential to have the support of public actors, with constant concern and essential action of governance for it to occur. Learning in this sense consists of allowing actors to acquire knowledge that enables them to develop contexts, whether physical, emotional, network, or process, so they become capable of reflecting and evaluating transition policies or innovations, as well as the experimental intervention processes being carried out. But how do we explain such a shortened innovation cycle, as observed in critical periods, especially that of COVID-19? Why can the development of contexts and meanings not often be accelerated when it comes to relevant public and social interests?

To understand the phenomenon of practice acceleration under pandemic pressure, this work was directed towards market constructivism formed by social structures, bringing to analysis a more sociological perspective<sup>3</sup>. Therefore, the work did not aim to analyze how marketing operations occur pragmatically when they seek to add value for offerors/sellers or buyers/users. The focus of Market Construction rejects the neoclassical economic principle that the market is composed of creations intended to satisfy the interests of the involved agents<sup>19</sup>.

Marketing literature has selectively explored the relationship between market aspects and the interactions among organizations, resulting in a focused attention on the practices developed to connect "market and marketing elements". Similarly, there is a less intensive approach to market agents and the complexity of their interactions and formatting<sup>4</sup>. Constructivist theory, in turn, has been underutilized in market studies, however, the new theories of market formation, within a constructivist paradigm, have brought the social configuration to the forefront of this investigation. The significance of Market Construction in this work comes from the fact that constructivist inquiry aims to elucidate the processes through which people describe, explain and perceive the environment they inhabit, including themselves. It seeks to articulate common forms of understanding, how they come into existence, their previous states, and how they can exist, with a direction towards the creative side<sup>13</sup>.

The contextualization of rapid changes in the health market in the first two years of the COVID-19 pandemic allowed for a proposed analysis of how markets are built from social practices. Recognizing that various actants establish practices and construct the structuring of new markets according to their meanings allows us to observe that there are not only economic actants but several others who participate in Market Construction. With the structure being composed of

civil society, professional organizations, and governmental bodies, new practices are incorporated, representing solutions and possibilities for innovation unfolding, incorporating exchange practices, representational practices, and normative practices.

As a key factor in national security, health requires effective functioning in the sector, demanding more research, especially after the outbreak of Covid-19, when both the market's potential and the extent of its problems became evident. According to Subedi (2023), public health spending has the capacity to promote equality and social justice; increase productivity and reduce costs. The combination of public and private investment efforts, in financing and product offering, represents a collaborative solution between organizations, where the government has the role of ensuring equitable access to products, promoting synergy with the private sector<sup>42</sup>.

This work highlighted the cooperation among governments, industry, and universities as responsible for distributing interests with a focus on economic and social well-being. Research and development of new products are more geared towards applicability, which transforms into practices of efficiency and scope, rather than the presentation of products for market recognition and leverage of sales with higher profitability. However, there are gaps to be filled in the connection between industry experts, which could be favored by public policies, as frequently mentioned by respondents.

A potential research agenda based on the new and recent practices adopted during the pandemic, with their implications for health professionals, patients, manufacturers, investors, and governments, is considered here. This could be relevant for highlighting promising solutions for reducing the social costs of health products, serving the population more broadly and efficiently.

A possible limitation to this approach is centered on the need for qualitative research with groups representing all involved actants, not limited to a single region or small groups of interviewees. It should encompass the private sector; organizations involved in research, production, and commercialization; regulatory entities; user organizations in both public and private spheres; innovation financiers; and the population using health products.

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