Potencialities of ciberspaSUS: social networks as devices of public health policies in Brazil

Abstract This paper examines two experiences of social networks developed as a space for strengthening public health policies in the Brazilian context. Objective: To describe and analyze some possibilities of using social networks as devices linked to public health policies based on the experience of two comparative cases currently underway in Brazil: The HumanizaSUS Network and the Community of Primary Care Practices. Methods: This is qualitative research with a comparative case study approach, with emphasis on the exploitation of data available in the public platform of both networks and publications around these two experiences. Results: Webometric data of the cases studied will be shown, pointing out aspects of differentiation and similarity between them from three axes of analysis: (1) theoretical-conceptual framework; (2) the design of the platform, its functionalities and its daily support process; (3) the singularities of the related policies. The discussion of these points indicates that social networks can function as devices for education, production of a collection of experiences, clinical collaboration and especially a collaborative creation of spaces for sharing experiences and collective reflection on the daily construction of public policy. Key words Public policies, Social networks, Collective health
Introduction

The process of reforming the Brazilian health system that led to the construction of the Unified Health System (SUS) was historically marked by the ethical-political commitment to life protection and the construction of a universal health system and, guided by this commitment, has also been successful in producing innovations in caregiving practice. Practical trials of other care arrangements (which were already taking place several decades before the reform) played a decisive role in this whole process, providing the basis for proposing innovations in the way of producing healthcare in Brazil.

Of course, this power of experiences can only be liberated when they are shared and offered to themselves to the production of knowledge and collective reflection. Moreover, this can be done in many ways, all of which can be said to be different ways of asserting collective intelligence (CI), that is, of asserting what defines the power of collective action in a field. Therefore, it is not surprising that, in the almost 30 years since the SUS, and since before, throughout the process that preceded and led to health reform, it has always been possible to identify innumerable devices that have played this role of facilitating or sharing experiences and collective reflection: different forms of social and political organization (professional associations, organized social movements, fora, and the like), formal spaces of public management and academic life (technical meetings, commissions, working groups, interagency committees, councils, conferences, congresses, seminars, and so forth), social media (publications related to different political articulation groups, reports and other technical documents, technical and scientific publications, exhibitions, and the like), among others.

The history of the invention of these manifold processes, technologies, devices, institutions, and other relational and collective apparatuses by which human experience can increasingly become common (a common wealth) largely corresponds to the history of the ways in which humanity has developed more and more powerful forms of CI, according to the conception of Lévy.

Only humans, in the animal kingdom, are capable of learning as a species. It is the very meaning of culture. Because it is cultural, human collective intelligence is perfected. It works, and increasingly deliberately, for its own improvement. The great ethical and universalist religions, philosophies, political emancipation movements, economic inven-

tiveness, law, and technical and scientific enterprise all work, each in a different way, to increase human power or, in other words, their capacities of collective intelligence.

Lévy’s perspective interests us because it evidences a cognitive dynamic in these different inventions of the human communities, that is, by showing us how these inventions deal with an intelligence that is decisive for the power of collective action of these communities. That is why this author can understand the history of these different inventions as the history of the establishment and expanded CI. A history whose most recent chapter corresponds to that in which this expansion takes its most precipitous leap, at a time when we are allowed to work deliberately to increase it.

Thus, whatever the “traditional” devices of the agency of the CI in a given field of practices, all of them have been deeply modified by the advent of the electronic communication network. The establishment of a worldwide computer network on a planetary scale that has managed or intermediated practically all aspects of our existence has caused a profound cultural transformation, largely due to increased and intensified possibilities of collective sharing and production of unprecedented knowledge, characterizing an authentic “sharing culture” – an expression used here in a purposely inaccurate and ambiguous meaning, to designate both a certain collective compulsion to share the most varied records of its existence through different forms of social media, and the fact that, regardless of any willingness to share, almost everything that happens (to us) leaves some virtually-readily shared-record.

This “sociocultural form that modifies social habits, practices of cultural consumption, rhythms of production and distribution of information, establishing new relationships in work and leisure, new forms of sociability and social communication” has been called by some authors of cyberculture.

Its specific health impacts are multiple and profound. Frequently highlighted are changes in the relationship with information and knowledge, of both users and health professionals, or the figure of the patient who already comes in at the consultation knowing everything about his disease, or the figure of the worker in a knowledge-intensive activity sector that must use the internet to be permanently updated. However, a more extensive influence can be identified, including a high incidence of such information and communication technologies in the work.
processes (online medical records, e-SUS, Telehealth, as quick examples), setting daily new and complex challenges for care practices.

The new technological and cultural environment has brought new possibilities for existing practices, such as training, dissemination of knowledge, management, monitoring and evaluation of health practices, but also inaugurated new ways of producing health, with the creation of spaces of exchange and reflection on practices or the establishment of devices for the permanent education of professionals, among other possibilities that are being explored. It is therefore not just an incremental issue, of incorporating “state-of-the-art technologies” for improvement and efficiency of processes already in place, but the inauguration of new relationships and new ways of producing health that, above all, are new powers of collective action, to put things in the perspective of CI. After all, in this perspective, we are interested in examining the limitations and potentialities of some specific uses of these new technologies, highlighting in this multifaceted scenario experiences involving the use of collaborative tools and the establishment of social networks.

It is worth noting that, in this work, we use the term “social network” in the narrow sense that it has acquired in the context of cybertulture, which is a virtual social network, that is, a space for all types of exchange and intensive information sharing, which has become the most widely used internet tool today. We are not only talking about platforms like Facebook™, although the importance acquired by this and some other social media forces us to understand their specificities. In other words, interest in the power of social networks leads us inexorably into the present state of affairs, and we have to take into account platforms like Facebook™, YouTube™, Instagram™, and so forth, but to consider them, above all, as a problem, namely: the massive imposition of its “algorithms” that, governed by a business rationale from commercial advertising, according to this logic, start to govern our interactions with other content and people.

That said, we can say that our interest turns to some “smaller networks”, for some unique experiments with activation of social networks through collaborative tools that have been carried out in the last decade in health. While articulating with large social networks, these experiments sought to construct spaces with distinct purposes, design, and own user-friendly functionalities, capable of producing a use value for the different health actors to stimulate participation.

The networks that we will examine through a comparative study of cases stand out because of these characteristics, but also because they are organically articulated to specific policies and because they have been expressive and continuous for several years, namely, the HumanizaSUS Network (RHS)⁹ and the Community of Primary Care Practices (CdP)⁹.

Methods

According to Bartlet and Varvrus¹⁰, the comparative case study approach (CCS) allows us to analyze how similar processes unfold in diverse contexts, with an emphasis on social interactions and their identifiable effects. These authors argue that the context should not be defined as place or location; instead, it should be conceptualized as something spatial and relational. Likewise, this approach is focused on the analysis not of states of things, but of socially constructed processes, as in the cases of RHS and CdP, ongoing processes with similarities, while keeping uniqueness, ways of functioning and effects.

The CCS encourages comparison between three axes: (a) a horizontal look that contrasts one case with another; (b) a vertical comparison at different levels of influence; and (c) a time cross-sectional comparison¹⁰.

We sought to make this comparison, including the concern to explain the common potential between the two cases being followed, with emphasis on the potential of social networks when linked to public policy.

Field of study: cyberspace

The “nature” of the field in which the two cases to be studied are developed can be treated as that of a certain type of “space” (virtual space), where a whole series of ontological and semiotic events produced in the human-machine interaction occurs. Thus, it can be called cyberspace, that is, a relational space capable of connecting, through electronic computing techniques, people from all over the world, media communication and sharing space. More than the sum of these parts, cyberspace expresses the composition deriving from this meeting between machine, people, knowledge, cultures, information and virtualized spaces¹¹.

In the case of selected social networks, both share the fact that they are linked to public health
policies referred to the Unified Health System (SUS). For this reason, we can call our field of study ciberespaSUS, highlighting with this expression – which does not disguise its pun nature – the meaning of a “land demarcation” of this gigantic public policy in cyberspace, its “occupation zones” by the forces and constituent forms of the SUS. Our cases under study are essential components of ciberespaSUS.

According to Lévy, a cyberspace can be considered a virtualization of reality, establishing a new space-time relationship from a wide range of possibilities of virtual interactions that often depart from the same structures of the “non-virtual” world, but without having a total correspondence with it, since the virtual world engenders its own codes and structures, its sociability and subjectivation. Also, this is how ciberespaSUS can be said to expand, compose, and recreate SUS itself.

**Procedures and data analysis**

The following steps were followed to perform this CCS: (1) Selection and descriptive presentation of each case, including the presentation of webometric data available on both platforms; (2) Identification and comparative analysis of the contrasting and similar aspects between the two, according to the three axes of analysis of the CCS referred to above, drawn from thematic categories; (3) Production of theoretical-practical correlations between findings and literature.

**Results and discussion**

**Case 1: The HumanizaSUS Network**

The HumanizaSUS Network (RHS) - (http://redehumanizasus.net) is a social network created and developed as a device of the National Humanization Policy of the Ministry of Health, with the aim of further expanding the Policy and providing society with a completely free and open collaborative space that would allow the dissemination and exchange of experiences around the so-called “SUS that works”, targeting SUS workers, managers and users around the humanization theme of SUS.

According to the description on the RHS platform:

*The social network of SUS workers, managers and users who daily act with the desire to make a SUS with equity, universal access and comprehensive health care [...] a space for sharing narratives about different ways of making the SUS, a place to share their experiences, expand dialogue and the public and democratic nature of health.*

Introduced as one of the devices offered by the PNH to foster networking, activate CI and increase collaborative power, the RHS aims to work as an open space to give visibility to the wealth invented throughout Brazil to create SUS and promote a network of mutual support to address the challenges posed to the humanization of management and care in the SUS.

With ten years of existence, it has received more than 4.8 million visits (average of 40 thousand monthly accesses) of about 3.6 million individuals, who viewed about 9.5 million pages. With almost 35 thousand registered users and 14 thousand published posts that received about 35 thousand comments, it seems like one of the most potent and perennial experiences of developing a social network linked to a public policy which we are knowledgeable of in our country.

**Case 2: The Primary Care Practice Community**

The Community of Primary Care Practices (CdP) - (https://novo.atencaobasica.org.br/) is a social network created as a device of the National Primary Care Policy (PNAB), with the aim of providing an online space where health managers and workers meet to exchange information and share experiences about their daily work through a platform that allows the establishment of virtual communities between PHC workers and managers to strengthen collaboration and share experiences in PHC. The primary target audience of CdP is PHC workers and managers, as well as researchers, educators, and students whose work is primarily linked to PHC. Shown on its platform as a “virtual space for building knowledge and learning from the experiences of each PHC professional”.

The idea guiding this project is that “by sharing an experience, the participant of this network can inspire other workers, whether his account is a reflection of a confrontation with positive results or not. Space is one of mutual encounter and learning, recognizing that each worker has something to teach and learn”.

With seven years of existence, CdP receives an average of 63 thousand monthly hits, adding more than 63 thousand registered users, more than 8 thousand experience reports, distributed by 168 thematic communities and 11 training
courses in progress, and is a reference space for the Continuing Health Education in PHC. 

**Community and singularity zones of each experience**

We will attempt to discuss the results of this comparative study based on three axes of analysis of the cases: (1) the theoretical-conceptual framework; (2) the design of the platform, its functionalities and daily support processes; (3) the singularities of the related policies.

**The theoretical-conceptual framework**

The theoretical-conceptual references that instruct the RHS and CdP projects are, respectively, those of Collective Intelligence (CI) and those of Continuing Health Education (EPS), and although both find expression in both experiences, we identify a greater weight of the concepts-tools of EPS in CdP and CI in RHS. The proposal of EPS directly links the processes of education to the reflection on the daily work. This proposal is, therefore, directly related to the meaning that projects such as CdP are gaining, since its central issue is to highlight ways of doing and unstructured knowledge that does not always take place in the institutionalized spaces of registration and circulation of knowledge.

Relating the competences of historically unrecognized workers to the knowledge structured from the daily work scene is an essential aspect of the EPS proposal and explicitly informs the CdP project, although it is part of the ethical-political meaning of both projects analyzed as they occur.

This framework receives strong influences from Paulo Freire’s Liberation Pedagogy and the Institutional Analysis of Lourau and Lapasade, inserting itself in a necessary construction of pedagogical relationships and processes that depart from within the teams in joint action.

In the spaces analyzed within the CdP as in the thematic communities and in the distance training courses, the operative of a Freirean practice, as in the incentive to network users to recognize their situation or experience as a problem to be reflected with critical awareness and in the radicalization of a dialogical perspective is identified.

Thus, we mention as a central point in the EPS, and that is present in both cases analyzed – the introduction of mechanisms, spaces, and themes that generate self-analysis, self-management, implication, institutional change, finally, critical thinking and experimentation.

This point also acquires centrality in the RHS project, not so much because of the influence of the EPS framework, but in consonance with the National Humanization Policy’s references (principles, guidelines, methods, and devices) that incorporate elements of the Paideia method and the Institutional Analysis. However, the theoretical-conceptual framework that fundamentally informs the RHS project is that of the CI as proposed and developed by Lévy and addressed in the introduction of this text, also establishing the theoretical framework underpinning the analyses of this study.

The concept of Collective Intelligence was proposed by Lévy from formulations built at the intersection of different fields of knowledge, such as Biology, Cognitive Sciences, Social Sciences and especially Anthropology and Philosophy. Costa affirms that collective intelligence operates mostly in the realm of the micro-policy of labor, insofar as it enhances the perception by each that interdependence vis-à-vis the actions of other individuals is found in their work activities. In other words, what allows the emergence of collective intelligence is the fact that it is perceived within a network of relationships that evidence this interdependence and the necessary composition with other individuals in the work process, a perception facilitated in the context of the social networks studied.

At the heart of this approach is the issue of collective action power, with the primary hypothesis that this power relies mainly on the ability of individuals and groups to interact and relate to, thus, produce, exchange and use knowledge. Therefore, it is vital that not only the intention or contents of this network express this power but above all, the tools themselves and the design of the platform must bolster collaborative and self-analytical practice.

Although it is possible to recognize the specific issues of each theoretical and conceptual framework present in the solutions sought in both projects, the differences between them also explain some unique characteristics of each one: the emphasis on the CI referential resulted in the production of a tool mostly open to inventions to be used in the case of RHS and to an environment with a high cross-cutting coefficient, since all the conversations that are structured in a simple way around posts, regardless of the subject, are shared in a single joint and public space, that
is, an emphasis on the highest possible intensification of exchanges, although the variability of uses and shared subjects ends up being greater; the emphasis on the EPS framework, on the other hand, refined the relationship with daily work and the recognition of unstructured knowledge for health work, increasing the exchanges based on reports of work experiences, organized by communities and courses which tend to ensure more thematic focus and depth, although it decreases the probability of cross-cutting exchanges. We emphasize that these gaps in the two platforms are more trend-related than exclusive expressions, although they are strongly marked.

Platform design: its functionalities and daily support process

The HumanizaSUS Network is a collaborative platform with the structure of a blog that aggregates a blog collection (of individual subjects, communities or institutions) developed with an open source content management system (CMS) in a process of technological development based on a collaborative design methodology where developers and users establish priorities and solutions jointly and interactively, supported by one of the largest global communities of free software development, allowing a rapid response to the demands of the community.

With simple features, the platform has an unobstructed flow of operation: any user who signs up on the site can send content (posts and comments), without prior approval. The newly published posts initially go to an area called “voting queue”, accessible only to registered users, where they remain for a week or until they receive the number of votes required to be uploaded in the main page. These two main features, the collective blog and this moderation queue in which the posts are validated by the user community itself, succinctly characterize the resources designed and built to set the HumanizaSUS Network in motion.

Besides this central mode of operation regarding the posts published individually in each blog, the platform also provides space for thematic communities, webinars and other online transmissions (event room) and digital collection Humanization.

In the CdP, the technological development of the tools and solutions used is also based on the principles of free software.

The first version of the platform was aired in March 2011, and since then each user has an individual profile from which it is possible to provide personal information about his/her institutional insertion, professional training, and work experiences. The interaction takes place openly in the thematic communities and, mainly, through the experience reports, narratives where platform’s users talk about their practices, systematizing knowledge about the work activities in the SUS.

The platform that was aired in December 2012 also uses open source software, with the following guiding principles for its development: (1) access to content based on the relationship with people and subjects/themes, (2) clinical collaboration from the posting of concrete problems and the sharing of work situations that demand help or reflection from other network users, (3) dissemination of processes and products or (4) articulation with interactive distance learning projects/proposals.

The functioning of the CdP is especially concentrated (1) in the space for insertion of experience reports; (2) in the communities created by the participants or facilitators, with specific and collective themes that are grouped around this theme; (3) in the free online courses, with a training and interactive bias around PNAB’s strategic themes; and (4) in the chat available on the platform. Also available are tools such as a collaborative event calendar and a space called “sampled blog”, characterized as a more direct communication channel between CdP’s team of facilitators, linked to the Primary Care Department (DAB) of the Ministry of Health and network users.

The performance of social networks of the type we are analyzing depends not only on the technological design and functionalities available (what we might call a software realm) but also directly on the online work process that supports these platforms (peopleware realm). In particular, the way in which their developers, editors/curators (as they are called in RHS) or facilitators (as they are called in the CdP) sustain relationships among themselves and with network users from a set of resources sociotechnical producing the engineering of social bonds and healthcare/management activities that can be produced there. Human mediation/curation arrangements provided in the post, experience reports or comments are determinants and conditioners of network life.

In other words, this means that the very design of the platform and the curation of its content are already strategic and produce specific effects. As in the health services network, the structure/design of the social network can facilitate or hinder the dynamics of network sociability.
For the active work of the facilitators or editors/supporters of the networks, in both cases, both CdP⁹ and RHS⁸ have an interdisciplinary team (consisting of professionals from the field of communication, humanities, health and information technology) to support the daily work of the network.

In the RHS⁸, in line with the principles of PNH¹³, the primary methodology that guides the work is the support function, worked with the specificities and singularities of cyberspace and enhanced with the concepts of curation originating in the museological field. The support functions of the editors include support for the use of platform tools and digital resources, affective support (hosting new users, new posts, comments, and so forth), support for mediation of meetings and connections and support as a curator of networked content and actions.²²

In the case of CdP⁹, the facilitators would be people hired to play the activating role of networks from intervention in the platform or in other spheres of related social networks, with the task of hosting new users in the network, mediating and articulating community networks with current issues within their thematic areas, foster issues relevant to PHC or strategic to DAB, as well as facilitating the participation of users in online courses, promoting articulation among communities and between CdP⁹ and cyberspace.

In the experience of CdP⁹, the curatorship method is also incorporated, improved and experienced in its radicality, especially from the event of the 4th PHC National Exhibition in 2014²². The curatorship’s central function, in both experiences, is expanding the expressive and strategic strength of a post, an experience report, a user, and so forth, that express themselves in multiple ways in the network, besides practicing a policy of relevance²²,²³.

In other words, from a Collective Intelligence perspective, the supply of connectivity by itself cannot be expected to occur among users, workers, and managers commonly. The technologies available in a particular social network can promote a lower or more significant potential to recognize and connect with the main issues arising in the daily health work, with the points that weave the dynamics of the communities in the health network, so that the connectivity offer will strengthen/foster already established cooperation dynamics, besides creating new ones. More individual and ephemeral use offers or sociotechnical devices activating the power of collective action can coexist within the same network and, among other things, their offerings and functionalities are reflected through the platform’s design.

The RHS⁸ and CdP⁹, due to shared characteristics such as adherence to the principles of free software, are relatively low-cost projects, but in any case require financial support from the public policy for continuing maintenance and technological development activities and for the team of editors/curators or facilitators who support their socio-technical devices on a daily basis.

The uniqueness of linked policies

We are analyzing two experiences of social networks each linked to a health policy with their unique characteristics, different technopolitical strategies, with a source/volume of its different resources and, therefore, attending to its political-institutional interests, although both are aggregated in the “common portfolio” of the Ministry of Health. It is vital to synthetically point out some of the differences between the policies that are expressed in the way each social network operates.

Linked to a cross-cutting policy that is PNH¹³, RHS⁸ actively incorporated into its working ethos a set of practices, arrangements and devices of the policy itself, among them, reception, matrix/institutional support, participatory/collaborative management, the triple inclusion method and the social participation of SUS managers, health workers and users. As in PNH¹³, the production of difference and cross-cutting nature work as an ethical-political principle of RHS⁸.

The CdP⁹ is linked to the PNAB¹³ and is related to a set of PHC characteristics, among which we highlight the extension and capillarity of the primary network; its performance concerning health demands directly related to the complex social relationships; the importance of the "conversation technologies" or light technologies in this space; the importance of the interdisciplinary and intersectoral action; and the valuation of workers’ education²⁴.

Among the many examples that we could take to show this linkage of policies with the network device, we will start from a concrete example, easily mappable in the respective social networks and with broad visibility of its effects inside and outside the virtual platform that was the realization of events, a strategy shared uniquely between both cases studied.

In the case of RHS⁸ and PNH¹³ linkage, the impact of the National Humanization Week (SNH) in 2014²⁵ was significant.
In celebration of the PNH’s 10 years of existence, the Ministry of Health (MS) promoted the SNH25, a decentralized event that focused on social mobilization as a way of organizing in different Brazilian cities, with the RHS as a privileged locus for activation/dissemination and aggregation of this mobilization that occurred simultaneously for five days. In total, 847 activities were carried out in 202 Brazilian cities, mobilizing more than 40 thousand people. RHS triggered and agglutinated the outcome of all these experiences virtually and gave georeferenced visibility to the humanization activities carried out in Brazil.

In the case of linkage of CpP and PNAB, the Fourth National Showcase of Experiences in PHC/Family Health23 was highlighted, a historical event for Primary Care in Brazil, which radically establishes virtual curatorship as a strategy for hosting a national event through a social network. The CdP also adds to this day to the collection of these experiences, which are available on the platform. The Fourth Showcase took place over 12 months, in several stages, with face-to-face and virtual moments, with the participation of many actors in constant interaction, including SUS managers, workers, and users, participation reflected in the 3,454 experiences published at the CdP as part of the Showcase. The event itself was an essential part of this process, but the procedural impact indeed extrapolated the relevance of a major event with a traditionally marked beginning, middle and end.

These events, as well as a set of practices that unfold in both experiences, make linking the social-political health network a vital device to value the experience realm of health work/healthcare process; to produce virtual squares of discussion on topics of interest; to establish living repositories of reports of daily experiences; to provide a space for dialogue between the State, workers and managers; to enable the expression and exchange of the uniqueness of each SUS operational territory in a continental country, facilitating the systematization and the study of facets of the diverse cultural and social realities existing in the Brazilian territory.

Thus, from a communication perspective, we can consider that social networks analyzed and linked to public policies may have a more directly identified potential for dialogic communication. Its greatest potential is not in the dissemination but in the possibility of establishing another communicational ecology between the State and civil society, an ecology focused on the collaborative creation of spaces for the exchange of experiences and collective reflection on the daily life of the health network, as well as their macro and micro political tensions.

From a pragmatic perspective, this can be done with training devices, community production, dialogue, and network activation that build on the engine of experience.

**Final considerations**

The opening of spaces such as RHS and CdP, linked to a state instance like the Ministry of Health, innovates to value the collective and daily production of individual and collective subjects acting in public health policies, local knowledge, loaded by the realm of experience, promoting a shift in the understanding that only the state transfers knowledge to its servers and users.

One of the most relevant aspects of projects of this nature is to give visibility to the elementary network that underpins the complex health network, connecting experiences and knowledge. Producing digital social networks whose substrate are the issues and potentials of daily health work, starting from the cases analyzed, has been shown to be a powerful device for strengthening the sense of community and sharing among health professionals, managers and users, by narrowing physical distances and collectivizing the zones of singularity and community that the field of health produces among the subjects that orbit it.

There are also open opportunities to increase the understanding of the changes in work processes promoted by contemporary technologies, offering a real possibility of measuring and mapping the collective action of health networks dynamically.

The analysis shows that social networks can function as health education devices, for the production of a collection of experiences/knowledge, clinical collaboration, dissemination, induction, and especially the collaborative creation of spaces of sharing experiences that emerge from the process of implementation and development of public health policies.

These results were obtained in specific contexts in which the theoretical references and the computational/communicational technologies adopted by the projects under analysis propitiate and incorporate the power of collective action as a central principle of its functioning, while at the same time aiming at its activation.
The results also point to the unlimited character of creative expansion that experiences such as these have the potential to achieve, both concerning technical aspects and the ethical-political aspects that derive from the realm of shared experiences of SUS users, workers, and managers.

Collaborations

SH Ferigato worked on the design and writing of all the stages of the article, coordinating the writing process; RR Teixeira contributed to the conception, writing and final revision of the text; FOL Cavalcanti worked on data production and text writing; BF Depole worked on the data production and text formatting stage.
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