Original article

The metaphors of collaboration, or the social construction of collaborative interactions between health professionals

Stefano Tomelleri[1], Roberto Lusardi[1], Giovanna Artioli[2]

[1]Dipartimento di Scienze Umane e Sociali, Università di Bergamo, Italy; [2]Settore Formazione e Aggiornamento, Azienda Ospedaliero-Universitaria di Parma, Parma, Italy

Abstract. This article illustrates the ways in which symbolic representations of reality, embodied in metaphors and language, can affect collaborative interactions in the current situation of social and economic change. We assume that corporate transformation and organizational configurations influence health professionals' representations in largely unconscious ways and, with these, their everyday practice. On the basis of empirical data collected through 13 focus groups in an Italian hospital, our intention is to show the extent to which joint working can be linked to three main metaphors each matching specific forms of social and professional interaction. The three metaphors of collaboration constitute different attempts to interpret social and organizational changes in proactive - encouraging social innovation - or defensive terms - as actions of cultural resistance. The three metaphors are: apparatus, family and team. In different ways, the first two represent forms of resistance to change and are widely present within organizations. The latter, on the other hand, consists of a proactive way to deal with ongoing social and organizational change. This metaphor testifies to the existence of a different approach to collaborative interactions, a perspective related to specific combinations of organizational and professional characteristics. This study indicates that organizational change and collaboration can be strengthened by metaphors that illustrate open, plural and highly heterogeneous professional settings.

Key words: inter-professional relations; collaborative practice; metaphors; qualitative research; organizational innovation

In search of organizational metaphors

Inter-professional relations has been analyzed from a range of scientific perspectives due to its impact on organizational efficacy and effectiveness. Management studies focusing mainly on structural aspects, economic incentives and flexible company designs have been shown to be the most effective strategies influencing collaborative attitude (1-3). From a different point of view, social and organizational psychology, looking at group attitudes and behaviors within workplaces, emphasizes the role played by the different forms of commitment and the positive effect of self-efficacy (4, 5). Adopting a multidisciplinary point of view, the "collaborative work" approach has emphasized the ways in which technological artifacts in workplaces act as mediators of social interaction that can be used for strengthening cooperative practice (6, 7). A fundamental contribution to this debate has been made by Richard Sennett who has devoted many years of study to collaboration and shown how this unique human behavior is powered by social rituals and practice filled with symbolic meaning (8).

This article intends to follow Sennett's insights in exploring the symbolic and cultural dimension of inter-professional collaboration, and, more specifically, it will focus on its metaphors.

The decision to study organizational metaphors derives from the theoretical and methodological assumption that, as Barnett Pearce (9) have argued, com-

munication is not only the interface, or the medium, through which social interaction happens. Communication is also the setting, or contest, through which social interactions are conceived and become actual behaviors and practice.

From this point of view, metaphors are not just combinations of images, metonymies, similes and other rhetorical figures of speech used to embellish language but, on the contrary, they are tools which forge social relationships with the outside world. According to Lakoff and Johnson (10), metaphors generate consistency between the inner world of individuals, their intimate and private emotions, and the social world at the micro, meso and macro levels.

The metaphors, via which we see and read situations, influence our behaviour and in turn become social actions with prescriptive values (11). What metaphors are then? They are chains of meanings that make up the syntactical-expressive possibilities of social actors. They are the range of expressive abilities of those who work in organizations and give value to daily practices (12). They are not restricted to moral imperatives ("the strength of the group", "the importance of working together", "the focus on goals"). These imperatives are certainly not irrelevant but they do not justify the complexity of the metaphors in use in social practice. In fact, they end up giving them a minor rhetorical function. As images in which symbolic meanings and social repertoires are concentrated, metaphors actually contribute to generating, maintaining and reproducing tangible interactive practices (13). The value of our actions does not only depend on declarations of intent, moral imperatives or practices but also and above all on the metaphors that unconsciously assign a sense of success or failure, approval or disapproval to the same practices (14). For each subject, the use of metaphors implies a socially shared way of thinking and perceiving actual situations and their power to bring about change in proactive or defensive terms. This derives precisely from their ability to contribute proactively to the daily practices we take an active part in (15): imagining our organization as machinery or brain or biological organism (11) contributes to defining the situation, and its analytical and decisional potential, according to Thomas's well-known axiom which states that "if men define situations as real, they are real in their consequences" (16). The power of a social order depends on the ability of its subjects to control the way the situation is defined (17). In our research, we argue that the notion of metaphor is a basic explanatory principle, not only for the researchers, but also for social actors in general: a cognitive relational activity of a tangible, dynamic and creative nature, which is useful for giving meaning and direction to contingent events that are not immediately associated with routines, and for positioning social actors within an interaction (18).

In this article we have looked for collaboration metaphors which significantly describe, and at the same time help to build, the inter-professional relationships within a public healthcare institution at a time of radical organizational transformation.

Study methodology

This paper illustrates the results of an empirical study conducted in an Italian hospital from 2010 to 2012. The study investigated the symbolic components of inter-professional collaboration (for further details on the theory and methodologies of the research and its overall results, see Tomelleri, Artioli 2013 (18). In this paper we have reanalysed the empirical basis of the research (which was made up of 13 focus groups) in order to identify the main metaphors of collaboration and analyse their links to the social and organizational changes under way in healthcare organizations.

In processing this re-examination of the empirical materials, we attempted to bring out these images and identify the most significant in terms of collaborative interactions. To this end we employed the grounded analysis method which included the various stages of coding and sorting the emerging images (19) until the three discussed here were identified: *apparatus*, *family* and *team*.

These three metaphors have been identified as macro-categories encompassing clusters of the images which emerged in the narrative data. This empirical material was gathered using both the stimuli provided by the moderation protocol and free dialogue between focus groups participants.

The empirical field consists of an Italian University Hospital, which is a health structure of large dimensions as the figures show: 3,800 employees, 1,233

beds, approximately 52,800 admissions annually and over 92,500 cases at Accident and Emergency wards.

A number of significant organizational changes have affected the hospital since 2000. These have led to a different organizational structure and a new general organization of the care process following the model "for intensity of care" (20). These changes are bringing in new organizational units and workflow configurations and they are inevitably influencing inter-professional routines and established practices, opening up new social interaction scenarios.

The study involved the creation of 13 focus groups whose members belong to 11 integrated activity wards: Cardio-Nephro-Pulmonary (CNP), Surgical (S), Accident and Emergency (A&E), Geriatric-Rehabilitative (GR), Maternity and Neonatal (MN), Neuroscience (NS), Onco-Haematological-Internal medicine (OEI), Pathology and Laboratory Medicine (PLM), Multi-Speciality Medicine (MSM), Radiology and Diagnostic Imaging (RDI), Head-Neck (HN). In the Cardio-Nephro-Pulmonary and Surgical wards two meetings were held. 109 professionals took part in the study from a range of professional categories. Table 1 summarizes the professional profiles of the participants and divides them into gender groups. The focus groups were made up of various professional categories: doctors, nurses, nursing coordinators and lab and radiology technicians. Thus, the composition of each meeting was heterogeneous in terms of professional status and ward. This methodological choice reflects our aim to simulate the relational dynamics that participants experience in their daily working lives. This heterogeneity mirrors the status differences and power asymmetries that are a feature of healthcare organizations (21). Conscious of the effects that such asymmetries might have had on focus group interactive dynamics (19), top managers (ward or unit heads) were excluded and the moderation protocol set up measures for stimulating the participation of all professional categories in meetings. More in detail, the moderation protocol involved three stages. The first was dedicated to stimulating the participants' more outward looking dimension and involved asking them to choose the image that best represented their idea of inter-professional relationships in their ward from those proposed by the researchers. The second focused on analysing criticisms encountered in daily practices which negatively impacted on relationships between professionals. The third looked at good practice, positive examples of inter-professional relationships which are effective in care practice. On average meetings lasted 55 minutes and were facilitated by a principal moderator, who gave participants suggestions and asked them questions according to the moderation protocol, and an observer, who was more interested in the interactive dynamics that stimulated the groups to begin discussions. The empirical data was elaborated in digital format and analysed using MAXQDA (22).

Table 1. Participants in the study divided according to profession and gender

Profession	Gender		Total - % f column
	Female	Male	
Laboratory/radiology			
technician	8	2	10 / 9.17%
Doctor	17	17	34 / 31.19%
Nurse	42	10	52 / 47.71%
Nursing Coordinator	5	1	6 / 5.51%
Other*	6	1	7 / 6.42%
Total	78	31	109 /100%

**Obstetrician, biologist, health and social care worker, physiotherapist, junior doctor.*

The apparatus: "We went from hospital to corporation"

The *apparatus* metaphor indicates hospital organization as a socio-technical architectural framework in which the symbolic mediation of communicative interaction is assigned primarily to a system of formal standards, coded procedures and impersonal regulations. It is the most generally used metaphor in the sample and there were no significant differences in its distribution over professional categories while it was particularly frequent in two wards: Maternity-Neonatal and Surgical. The common feature of these wards - helping to explain the popularity of this metaphor among the people working in them - is the high level

of mechanization in operating procedures leading to a corporatization process.

The key points of this metaphor are: the disconnection between centre and periphery and between health-based and managerial-based knowledge, the breakaway of the technical-administrative system from the overall organizational ethos and, more generally, a deterioration in joint working practice.

Collaborative practice is penalised here by a widespread sense of resignation in the face of the power of the technical-administrative "machine" which is identified as the main cause of the deterioration in the quality of interaction between colleagues. In this sense, the metaphor is a fundamentally defensive one which is often accompanied by displays of personal unease and distrust in relation to the organization powered in particular by the communicative and cultural distance cited between the centre (i.e. top management) and the periphery (the operational units). This disconnection between the centre and the periphery also brings out existing conflicts between the two orders of knowledge – clinical and managerial knowhow - which have been called on to coexist in public health organizations since they were restructured into corporations (23, 24). The apparatus provides the technical infrastructure for the realization and expression of both even though an unresolved tension exists between them (and the actual professionals embodying them) that can hinder collaborative practice. This *communication difficulty between the clinical and administrative-managerial dimensions* emerges clearly in the words of Mario, a doctor in the Multi-Speciality Medicine ward, who has been working at the hospital for 35 years:

We went from hospital to corporation. Not only in the sense of work reorganization, but also because over time it became clear that the objectives had shifted. By objectives I mean that the things we work for had radically changed. And it was a momentous change which wasn't easy for everyone (MSM1[1], Mario, doctor).

This metaphor primarily refers to the adoption of organizational models inspired by private business models and appears to be linked to profound change in the *raison d'être* guiding the actions and behaviour of health professionals in caregiving contexts. It highlights the juxtaposition of two organizational objectives which are not always in perfect harmony: on one hand, traditional patient care and assistance values characteristic of public health institutions, and on the other, business objectives which are drawn up according to regional and national guidelines. Where the staff interviewed perceived a deviation between the objectives drawn up on the basis of budgetary constraints and real care practice needs, problematic tensions between the demands arising from two orders of distinct elements emerge. On one hand, financial management (inspired by business models) which imposes stringent quantitative goals (for example, patient's timeframes or restriction for using specific equipments or medicines) and on the other, patients' care needs which are not always seen as linked to the first order of elements. In the following extract, Francesca, a nurse with 20 years of service, "blames" Diagnostic-Related Groups[2] (DRG) for discouraging the *corporation* from carrying out the primary task of the *hospital*, that is, the care of patients:

Coming from the "old guard", what I have noticed is that the DRG is fundamental [...] therefore doctors and surgeons can only deal with illness. The earlier we operate, the better. It wasn't like this before (S1, Francesca, nurse).

Although the principle of rationalization - on which the processes of practice corporatization and standardization are based - answers the need for cost containment and improved safety levels, the consequences for inter-professional relationships and daily behaviour may compromise the very objectives that the process is pursuing (15, 25). Paola, an anaesthetist in the Surgical ward, describes the way in which the development of the technical-administrative apparatus, by means of which the normalizing action of

[1] For ward identification codes, refer to page 4.

[2] Financial management of the National Health System is based on a classification of Diagnosis-related Groups which encompass every treatment (diagnostic and therapeutic) linked to the specific health problem (corresponding to the diagnosis) concerned. The cost of each DRG is determined by the Ministry of Health, which gives the Regional Authorities the task of distributing funds to the local health authorities and hospitals in their area of competence.

the rationalization principle is primarily achieved, may lead to *a reduced sense of responsibility and motivation*:

I certainly believe that information and documentation and the statistics and conclusions following from them are fundamental to progress. However there is more to our work than this. At times I'm not saying we lose sight of the patient, but we may have to write something, produce a document or sign medical records [...] All these checklists that are heaped on to us in the operating department are in actual fact useful but one would be enough. We have the medical records, but the patient is identified 300 times. I know, it's true, it's for safety reasons. However, let's give some credit to those working in the operating theatre. The people working there are responsible enough. We only need to identify the patient once (S1, Paola, doctor).

All this, as was demonstrated by a considerable chunk of the participants in the focus groups, is seen as "overburdening" work routines with commitments and paperwork, making them less and less manageable in accordance with the various professional agendas. The words of Giovanni, a doctor in the Maternity-Neonatal ward, at the hospital for over 30 years, describes *the uninterrupted and chaotic flow of information and bureaucratic requirements* which professionals feel subject to:

There are so many commitments that we didn't even know we had the week before: a telephone call comes in, an email from the university, an email from the hospital. They come in all the time. We find out about many of these commitments only moments before and the organization is a bit like this, everything piles up (MC, Giovanni, doctor).

The apparatus metaphor amplifies the *disconnection between bureaucracy and care practice* increasing the daily fatigue involved in attempting to reconcile conflicting elements. Giovanni, an orthopaedic surgeon in the Surgical ward, expresses his experience of the bureaucratic layers of the organisation in this way:

What bothers me is the reason behind all this [fulfilling administrative requirements]. It's the clinical reason for what we do that interests me, as a clinician. As far as bureaucratic motivations are concerned, the most frequent answer is: "because it is required by the Ministry", "it is requested by the Regional Authority". [...] And this is where we lose that mechanism of saying "yes, I'll do it because I am convinced that it is useful". However, if I am told "it is because authorisations (now we have accreditation, before it was authorisation) require it" (S2, Giovanni, doctor).

As it can be noted from the numerous extracts given, the Maternity-Neonatal and Surgical wards are those which feel the effects of the emergence of what sociologist Mauro Magatti (26) calls *functionalized institutional fields,* in which prevail expectations that individual actions and social interactions can be exclusively controlled by means of impersonal and prescriptive procedures to the greatest extent. These wards are more vulnerable to negative contact with the outside world (just think of the media outcry caused by cases of malpractice in these units) and more vulnerable inside the organisation to financial cuts (23).

In short, the apparatus metaphor encompasses experiences of daily frustration and fatigue caused by incessant needs to recreate normalizing expectations, typical of the managerial and administrative structures of health organizations, with the unpredictability of real care practice, which are resistant to attempts to control them according to abstract and formal principles. The gap between daily professional practices and the sense of collective action conveyed by the health policy agencies appears difficult to narrow within this metaphor. Actions are increasingly carried out on an individual basis, as an extreme form of resistance to a technological-administrative system that is perceived as oppressive and superfluous. This individual isolation inevitably leads to deterioration of collaborative interactions, which does not disappear from professionals approach to their work lives but becomes increasingly fragile, less frequent and ad hoc.

The family: "A family of lovers…"

The family metaphor is indicative of the greater level of social cohesion inside the operating units of the hospital. It is mainly used by nursing professions and laboratory technicians (in almost half the people in-

volved in the research) while it generally concerns one in three doctors. It involves more than half of the hospital wards and the following in particular: Multi-Specialist Medicine (MSM), Surgical (CH), Geriatric-rehabilitative (GR), Maternity-Neonatal (MN), Radiology and Diagnostic Imaging (RDI), Cardio-Nephro-Pulmonary (CNF), Neuroscience (NS), Accident and Emergency (A&E). The individuals sharing this image generally have a lengthy professional career behind them with an average of twenty years experience.

Professional interaction is envisaged as closely interwoven with personal interaction, and the emotional dimension of social relationships is seen as being inherent to the operating mechanism of the organization. This image of collaboration is generally resistant to organizational change and facilitates personal/professional interaction even in the face of criticisms of a structural and organizational type.

The most important features of this metaphor are: a tribal or clan type solidarity concept, a clear boundary between inside and outside, a primary focus on the emotional dimension, a feeling of nostalgia for the past.

The family concept echoes the Durkheim concept of "mechanical solidarity" characteristic of simple organizations in which the division of labour does not prevent professionals from mutually performing the same tasks, duties and activities and members feel part of a society with a strong community identity (27). In our case, these are operating units with a high level of operational uniformity in which, that is, each function and party has an identity and relative structural simplicity (roles, units, divisions, specializations). The notion of mechanical solidarity explains why this is a metaphor used primarily by the nursing professions which tend to develop a strong sense of social cohesion often fuelled by rivalry with the doctors (4, 21).

The clear boundary between inside and outside, according to the "them" and "us" dichotomy, is a second feature of the family metaphor. This boundary sanctions a maximum level of internal solidarity with those perceived as being members of one's reference group while professional interaction with the outside is often condemned due to the prevalence of ethnocentric forms of relational coordination which tend to safeguard internal cohesion (24, 28).

A third aspect of the family metaphor concerns its primary focus on the emotional dimension and resistance to change. The solution to organizational problems is often looked for in personal motivation and individual personality. The future and change are envisaged as threats to the group which is seen as emotionally stable. Fear of change is combined with betrayal anxieties and anger towards those who contravene the rules and shared values.

As far as resistance to change and the emotional dimension is concerned, the testimony of a nurse, Luisa, who has worked in the hospital for 40 years is important. Luisa confesses that she is nostalgic for the past, when the family metaphor was widely shared and the main way of interpreting professional and interpersonal relationships. The "working" family was also the setting for open, trusting relationships in which shared values and group rituals created typically close and emotionally laden relationships. Luisa recounts:

I'd like to say that relationships, even society, changed first 30 years ago… *Something has changed*, now we are in a period in which we need to make an impression, show off, in which each of us think more about ourselves, are a bit more selfish. I remember that the nurses working here were once a family for me, *a colleague made cheese with the leftover milk for us*. That is, there was a good relationship between us, now these things are no longer, maybe I am disappointed, because I'm tired now, however relationships with colleagues… they see you as being old, I'm sorry to say it, but it's the case, my colleagues no … *nothing is sincere anymore,* you feel that nothing is sincere anymore. I'm speaking for myself, but… we passed from a family to something colder. For example, if someone is at home for a while and then comes back, "how are you?"… no one asks you that anymore (MSM, Luisa, nurse).

Luisa speaks of an idyllic past in which relationships were sincere and filled with mutual affection. After the first major change in her career the interpersonal relationship balance was disrupted. Professional relationships are *no longer able to provide stability* and are now seen as profoundly negative. Sara's story shows this. After 20 years of service and various "let-downs"

she has reconsidered her relationships with colleagues, causing her great distress:

I worked for 15 years in the Pneumology ward and I considered it a family, then the first time *they let me down* I was very upset with certain people. Several colleagues behaved in a way I wouldn't have expected and *I got depressed*! (GR, Sara, nurse).

The family metaphor represents collaborative relationships as *a search for stability and cohesion* rather than change. A nurse at the hospital for 18 years, Simona's account also indicates that relationships are no longer seen as family-based after the first organizational changes:

My ward is no longer there, I work for... I don't know who. I work for everyone, but I no longer have this feeling of home. I remember that several years ago when I unlocked the door of a ward, *I was opening my own front door.* Not now, I no longer have that sensation (S2, Simona, nurse).

The primary focus on emotional life and resistance to change are the salient features of the family metaphor which most of all indicate a defensive approach to the organizational changes that, over the past 20 years, have profoundly transformed Italian healthcare scene.

This metaphor does not only evoke emotions such as fear, nostalgia for the past, a sense of disorientation or disillusionment with the new; it also expresses a *strong sense of internal solidarity and cohesion* well represented by the mother image in Paola's account of her work as a radiology technician-coordinator who has been supervisor for five years but has worked in the hospital for many years:

I feel very close to this family (Simpson family image) because in addition to having a relationship with the youngsters that work in the X-ray room – they are young – at times *I also feel very much like a mother*. Its not only that they argue with me, at times they come – I'm not saying to tell me their problems – but they come here, they sit down – there's a seat – they sit down and they chat to me and I feel very... we also argue sometimes which logically, I think, makes this pseudo family disappear, because then we're in conflict and everything breaks down, however in those moments of…*I feel myself a bit like a mother to all those youngsters* (RDI, Paola, Radiology Technician-Coordinator).

The reassuring and protective atmosphere within the group serves to mitigate the effects of discussions or arguments. However the most damaging rivalries and conflicts are generally projected outwards, as another laboratory technician, Susanna, tells us. Having worked in the hospital for 25 years, she describes a relationship of mutual trust within the department and rivalry with the outside world:

In the Virology ward our work is totally manual. Relationships between colleagues and supervisors are good and there is a great deal of collaboration. There are four technicians and two supervisors. We may discuss an error but we do not try to find a guilty party "it was you!" The first thing is to understand why it happened and how come. We have been together for many years, but there have also been a few staff changes, in managers, technicians. In short, it's a small unit, outside we find ourselves in a situation that… However we also feel tensions inside. We also feel them inside and benefit from the fact that there's none of that rivalry between us that I spoke of earlier [she refers to another participant].We don't argue about holidays, we come to an agreement. We haven't had big staff changes and I think this has helped a great deal. There's collaboration. For example, I work part time, therefore I work up to a certain time, and my colleague takes over. There's mutual trust, we are perfectly in synch with one another (PLM, Susanna, laboratory technician).

The relationship of trust inside the ward assumes a certain intensity which Alberoni has defined as *mutual love* (29), a typical feature of situations with strong social cohesion. Giacomo, a 51-year-old doctor who has worked for nine years in the Multi-Speciality ward, describes a situation of falling in love, *a family of lovers*, in clear contrast to an earlier account by Luisa, a 59-year-old nurse who after leaving her first ward no longer found that family atmosphere:

We have been together for 9 years. At the beginning *we felt like a family of lovers, now we carry on like…* However, in our group, this feeling that the first thing is the result, which doesn't mean healing, but means do

it in a certain way, do all that is possible in the best way possible, has been embraced by everyone who is here to work (MSM, Giacomo, doctor).

The family metaphor sees the emotional dimension of social relationships as the primary focus. Mutual trust, a sense of protection and warmth, loyalty and openness: these are the sentiments behind the group's strong social cohesion, a mechanical-type solidarity which projects conflicts outwards from social bonds that are recognized as family-based. Furthermore, each betrayal of this emotional pact is experienced with deep regret (24).

Long-term professional experience unites the various subjects, primarily the nursing staff, who use the family metaphor as an explanation for their organizational situations. The doctors seem to be less sensitive to this metaphor as a result of a tendency to develop intra-professional bonds of a more corporate type in which the emotional component is secondary (30).

Changes over the past few years are requiring health professionals to rethink their professions and their roles within the hospital (23) but the family metaphor tends to favour the emotional dimensions of social action over the rational and instrumental mechanisms at the heart of the decisional criteria of the hospital managerial class. This explains the nostalgia for the past, when corporatization and rationalization work processes within the hospital had not yet begun and staff on the wards were used to working together for long periods without turnover or temporary personnel.

The result is widespread relationship unease, projected above all to the outside of the reference group, as if the organization itself was becoming hostile to its occupants.

The family becomes a refuge, a place of resistance and defence in which relationships of trust are daily realities and contrast with the corporate context which is perceived as distant and external to the authenticity of the social bond.

The team: "This word keeps coming out… team"

The team metaphor represents a hospital organization made up of a range of subjects each of whom is dependent on the others in both coded and informal ways. Its occurrence in the sample was more limited than the previous metaphors, but it emerged in particular in the Cardio-Nephro-Pulmonary (CNP) and Radiology and Diagnostic Imaging (RDI) wards. Both wards are made up of strongly heterogeneous scientific and professional communities in which professionals belonging to various medical specialities and with different technical skills cohabit within the same organizational frame. The heterogeneity that fuels this metaphor is also present in other wards but in the two mentioned here it seems to have been increased by the reorganization of hospital wards which took place from 1999 onwards (bringing together different medico-scientific and professional cultures) and by the crucial role played by technology, unlike the other contexts in which it performs a mainly accessory function and does not mobilize specific interactive dynamics (31). The metaphor is also more commonly used among doctors than other professional figures. The salient features of this metaphor are: a high level of interdependence between the various professional groups and organizational units, the acceptance of conflict as inherent to organizational life and, finally, a focus on problem solving.

The interactions that make up the complex hospital universe, filtered through this metaphor, involve significant levels of general conflict which tend, however, to be balanced by a sometimes resigned awareness of interdependence between parties. This metaphor recalls the Durkheim concept of "organic solidarity" characteristic of complex organizations in which the division of labour and social differentiation leads to the need to share individual and group resources in favour of collective survival (27). Frequent inter-professional comparison and the pooling of ward resources seem to stimulate relationship openness which may impact positively on the quality of collaborative interaction (4). It is interesting to note that even in these wards budgetary objectives are mainly assigned to the individual units that make up the wards, effectively placing the different units in direct competition. However, an image of the organization emerges from the team metaphor that crosses the boundaries of unit and role and places the solution to concrete problems at the centre of professional behaviour. This approach to problem solving is aimed not only at achieving organizational

objectives (which remain rarely shared by staff who are torn between the caregiving process and managerial objectives), but also at fulfilling the universal imperative of care inherent in the professional mandate of healthcare workers (21). The universal professional role component appears to prevail over the sense of belonging to the local context.

The team metaphor is defined in a simple but effective way by Michele, a doctor in the Radiology ward, who highlights the *interdisciplinary quality and interdependence* of the individuals involved in the therapeutic process:

It keeps coming up, this word... team. I think it's a bit overused, even though ours is truly teamwork which includes the simultaneous involvement of at least three or four different types of role: physicians, doctors, radiotherapists, technicians. […]*Team work is typical of our work, we are used to working in this way* (RDI, Michele, doctor).

The idea behind the team metaphor is that coordinated action, in which each member performs his/her own task in an interdependent, efficient and effective way, can solve patient's problems. This may seem a somewhat utopian representation, but this is how the professionals identify proper working in healthcare organizations, as the account of Simonetta, who has over 20 years' experience, testifies:

At times a sick person comes to us on time, has his or her session, it is successful and then transport arrives on time. There's an answer, we manage to solve the problem. Maybe it was a check-up chest X-ray, the patient is healthy, he's well, it was nothing, or we decide to admit him to hospital because he has some illness, *but everything runs smoothly* (CNP, Simonetta, nurse).

Working in a team marks a change in the way professional behaviour is perceived passing from an individualistic vision to a group concept, from an egocentric interest to a collective focus which involves the most abstract levels of hospital organization. Luciano states:

Everyone was in it for himself, everyone was concerned with his own prowess, no-one was interested in anyone else... this was the sensation I was getting ... compared to where I came from. In the past few years I must say that the situation has been turned around, there's a willingness on everyone's part to create this team I was speaking about earlier. I am definitely experiencing it, in my opinion it's happening in our ward. I'm changing my views, it's happening in our department (RDI, Luciano, doctor).

Working as a team is justified because of its focus on problem solving for the good of the patient, in the words of Ferdinando, a doctor in the Radiology ward in the hospital for 12 years:

I am a doctor and a manager: at the exact moment the patient is having an examination I have to issue a medical report. If I and my colleague do not work together, I'll still sign the report, but it's not me or you who loses out it's the patient (RDI, Ferdinando, doctor).

Problem solving is represented as a method of inter-professional and interdepartmental working, which allows conflicts, seen as inherent to the organization, to be mediated in order to reach a common goal. Social interactions are thus arranged on the plane of *situated action* in which the various actors involved look for ways to align themselves to solve a specific problem regardless of their professional role and unit of origin (32). Monica, a physician from the Head-Neck ward, in service for approximately 15 years, tries to solve a problem by paying less attention to the latent conflict between objectives and new organizational structures and instead focusing on the task at hand:

Well then, does the test have to be delivered? Management has removed the team that brought in the results of urgent medical tests at certain times of the day. So what do I do? I go, even though by law I can't leave the ward, but the health management has said I must do it. Then, what should I do? There are few instruments and so what should I do? Even though it's not your job, you do it (TH, Monica, doctor).

The professional satisfaction levels of the people participating in team activities is important. Satisfaction arises from the realization that it is possible to

solve a difficult situation together. Pleasure in working together to reach a goal is a fundamental aspect of teamwork, as Angelo, working in the Cardio-Nephro-Pulmonary ward shows:

An important procedure was missing in our hospital. I went to train so that I could do it together with other professionals as an interdepartmental working group: radiologists, doctors, nurses and radiology technicians. We set up this procedure which is producing good results. We are carrying out a load of examinations and the entire hospital is sending them to us. Conflicts arose, that's inevitable, because it's a radiological procedure carried out by a doctor and a radiologist, who up had never been involved in it before. He realized that it was a necessary procedure because it was basically a radiological procedure. In short we managed to come to an agreement. We argued somewhat with another department, but we succeeded in setting up something truly useful, which satisfies everyone (CNP, Angelo, doctor).

The importance of the emotional dimension in collaborative behaviour also emerges in the words of Giuseppe, a doctor in the Multi-Specialty Medicine ward, who emphasises both the negative and positive aspects of the emotional experiences involved in creating a team spirit:

These things really do still work [working together], the ability to get excited when things go well; to get emotional in a negative sense when a mishap occurs; rush about when there's a need; act like a team at a difficult time; move faster if necessary to solve a problem in a day and a half instead of a week (MSM, Giuseppe, doctor).

In the team metaphor, the level of communicative interaction within the department is high even though it does not reach the level of the family metaphor, while relationships with the outside flow better thanks to greater sharing of common objectives. This metaphor is not particularly widespread in the sample, but it testifies to a change in the way health professions are perceiving inter-professional relations and the presence of a different perspective. This metaphor opens up scenarios of transformation and evolution inside the organization, highlighting the existence of collaborative behaviour that is more effective in dealing with the challenges that the organizational changes in the health system are imposing on the care professions and services.

Conclusions

This article illustrates the ways in which symbolic representations of reality, embodied in metaphors and language, can affect the social and organizational changes currently underway in healthcare. The apparatus, the family, and the team metaphors highlight different ways in which social actors perceive and reproduce the healthcare scene and daily teamwork dynamics.

The apparatus metaphor views the hospital organization as a complex machine governed by impersonal rules and formalized, prescriptive instructions. This metaphor indicates high healthcare professionals' expectations that social interaction could also be controlled by the same functional principles with a higher level of responsibility given to coded procedures. In general terms, this metaphor means: 1) low levels of collaborative interaction; 2) relationship difficulties within the organizational unit; 3) conflict with other organizational units. This is the most widespread metaphor in the sample and it particularly entrenched in the Maternity-Neonatal and Surgical wards which are characterized by highly mechanized routine activities and equally high collective expectations. This metaphor seems to accompany a regressive process of relationship isolation and lack of motivation on the part of the staff which impacts negatively on collaborative dynamics.

The family metaphor identifies a context involving significant levels of social cohesion often evoked in nostalgia for an idealized past in which professional interactions were profoundly interwoven with personal interactions and even emotional components were inherent to the organization's working mechanisms. This scenario appears to be dominated by "mechanical solidarity" which links "inhabitants of the same organizational territory" thereby facilitating internal professional interactions even in the face of criticisms of a

structural and organizational nature to the detriment of general organizational aims.

The family metaphor indicates: 1) maximum levels of internal collaboration to anyone perceived as a member of one's social group; 2) interaction with other parts of the organization are often viewed negatively; 3) relational isolation which tends to safeguard internal cohesion. This metaphor is more widely used among nursing staff, regardless of the department they come from. It is also marked out by a search for balance in an attempt to reproduce the conditions that make the existence of the family possible.

The team metaphor sees hospital organization as a heterogeneous blend of organizational and professional players who interact according to both formal and informal methods to make a success of daily problem solving. Social interaction is organised on the plane of *situated action* in which the various actors involved look for ways to align themselves to solve a specific problem regardless of their professional position and operating unit (32). A significant level of general conflict is noted, which however is balanced by a widespread sense of "organic solidarity" fuelled by a focus on daily problem solving. Levels of communicative interaction inside the unit are high although they do not reach the levels of the previous metaphor while relationships with the outside flow better thanks to more diffuse sharing of common objectives. This metaphor is not particularly widespread in the sample but it is evidence of a change in the way the health professions are perceiving inter-professional relations and the presence of a new and different perspective. The original aspect of this metaphor is seen as contrasting with the other more pervasive metaphors in our sample. It is mainly doctors and nurses with supervisory roles or tasks who report its existence. Belonging to a different ward also affects its distribution. In fact, it is most widespread in the Cardio-Nephro-Pulmonary wards, in which different professional communities and disciplines are required to cohabit, and Radio diagnostics, in which greater interactive complexity is brought into the collaborative dynamics of the symbolic and pragmatic mediation of technologies on which the activities of the different units are based (21). This metaphor opens up organisational transformations and evolution scenarios which seem to make dealing with the challenges imposed professions and services for reaching more effective standard. One of the challenges concerns inter-professional collaboration seen as an opportunity and not only, as in the previous metaphors, in the context of bureaucratic overload or family clan methods (15, 33, 34).

The study of the three metaphors gives us some useful pointers for understanding the collaboration in the organization. In the first place, it shows that the symbolic and narrative nature of such practices, often seen as the soft dimension of organization, impact on the success or otherwise of organizational change (11, 12). We have seen how the apparatus metaphor struggles to recognize collaborative interaction. This aspect may compromise the outcome of procedural changes that imply inter-professional work by obstructing their implementation with antagonisms and resentments (13).

Secondly, the emotional dimension and trust are confirmed as being behind collaborative behaviours (4, 8) but the metaphors also highlight their ambivalent nature. This ambivalence is explicit in the family metaphor: professionals who see themselves as a family may tend to isolate themselves within the unit. This view of trust in the organization is generally counterproductive to innovation and to collaboration between wards.

Finally, the team metaphor identifies the focus on problem solving as an opportunity for collaboration in which relationships with other professions are enhanced and supported pragmatically. The condition for inter-professional team work appears to be the development of heterogeneous, plural and goal oriented working groups in which working together is primarily a means to solve problems.

References

1. Arya B, Lin Z. Understanding Collaboration Outcomes From an Extended Resource-Based View Perspective: The Roles of Organizational Characteristics, Partner Attributes, and Network Structures. Journal of management, 2007; 33: 697-723.
2. Wincent J, Anokhin S, Örtqvist D, Autio E. Quality Meets Structure: Generalized Reciprocity and Firm-Level Advantage in Strategic Networks. Journal Of Management Studies 2010; 47: 597-624.
3. Carton M, Cummings J. A Theory of Subgroups in Work Teams. Acad Manage Rev, 2012; 37(3): 441-470.

4. Caricati L, Mancini T, Bianconcini M et al. Psychosocial predictors of collaborative practice between nurses and physicians working in hospitals. Acta Biomed for Health Professions, 2014; 85: 32-40.
5. Meyer JP, Stanley DJ, Herscovich L, Topolnytsky L. Af¬fectiveEmotional, continuance, and normative commitment to the or¬ganization: a meta-analysis of antecedents, correlates, and consequences. J Vocat Behav 2002; 61: 20-52.
6. Xiao Y. Artifacts and collaborative work in healthcare: methodological, theoretical, and technological implications of the tangible. Journal of biomedical informatics 2005; 38: 26-33.
7. Cambrosio A, Keating P, Mogoutov A. Mapping collaborative work and innovation in biomedicine a computer-assisted analysis of antibody reagent workshops. Social Studies of Science 2004; 34: 325-364.
8. Sennett R. Together: The Rituals, Pleasures, and Politics of Cooperation. Yale University Press, New Haven, 2012.
9. Pearce WB. Communication and the Human Condition. Southern Illinois University Press, Carbondale, 1989.
10. Lakoff G, Johnson M. Metaphors we live by. University of Chicago Press, Chicago, 1980.
11. Morgan G. Images of Organization. Sage Publications, Newbury Park and San Francisco, 1998.
12. Morgan G. Imaginization: New Mindsets for Seeing, Organizing and Managing. Sage Publications, Newbury Park and San Francisco,1993.
13. Tomelleri S. The Doctor, the patient, and the metaphor. World Futures 2012; 68: 206-211.
14. Casonato M. Immaginazione e metafora. Psicodinamica, psicopatologia, psicoterapia. Laterza, Roma-Bari, 2003.
15. Manghi S. Il medico, il paziente e l'altro. Un'indagine sull'interazione comunicativa nelle pratiche mediche. Franco Angeli, Milano, 2005.
16. Thomas W, Thomas DS. The Child in America. Behavior Problems and Programs. Alfred A. Knopf, New York, 1982.
17. Foucault M. L'ordre du discours. Paris, Gallimard, 1971.
18. Tomelleri S., Artioli G. (eds.). Scoprire la collaborazione resiliente. Franco Angeli, Milano, 2013.
19. Cardano M. La ricerca qualitativa. Il Mulino, Bologna, 2012.
20. Lega L, Villa S, Barbieri M. Restructuring patient flow logistics around patient care needs: implications and practicalities from three critical cases. Health Care Management Science 2003; 12:155-165.
21. Tousijn W. Il sistema delle occupazioni sanitarie. Il Mulino, Bologna, 2000.
22. Kuckartz U. MAXQDA: Qualitative data analysis. VERBI software, Berlin, 2007.
23. Vicarelli G (ed.). Cura e salute. Prospettive sociologiche. Carocci, Roma, 2014.
24. Lusardi, R. Corpi, tecnologie e pratiche di cura. Uno studio etnografico in Terapia intensiva. Franco Angeli, Milano, 2012.
25. Timmermans S, Berg M. The Gold Standard: A Sociological Exploration of Evidence-Based Medicine and Standardization in Health Care. Temple University Press, Philadelphia, 2010.
26. Magatti M. Libertà immaginaria. Le illusioni del capitalismo tecno-nichilista. Franco Angeli, Milan, 2009.
27. Durkheim E. De la division du travail social. Les Presses universitaires de France, Paris, 1893.
28. Friedkin N. Social cohesion. Annual Review of Sociology 2004; 30: 409-425.
29. Alberoni F. Genesi, Garzanti, Milan, 1989.
30. Adler PS, Seok-Woo K, Heckscher C. Perspective-Professional work: The emergence of collaborative community. Organization Science 2008; 19: 359-376.
31. Bruni A. La medicina come ingegneria dell'eterogeneo e pratica socio-materiale. Rassegna Italiana di Sociologia 2008; 3: 451-476.
32. Alby F, Zucchermaglio C. "Afterwards we can understand what went wrong, but now let's fix it": How Situated Work Practices Shape Group Decision Making. Organization Studies 2006; 27: 943-966.
33. Numerato D, Salvatore D, Fattore G. The impact of management on medical professionalism: a review. Sociology of health & illness 2012; 34: 626-644.
34. Lusardi, R. "Usanze locali": Evidence-Based Medicine e pratiche professionali in Terapia intensiva. Salute e Società 2010; 9: 145-154.

Accepted: 16 December 2014
Correspondence:
Stefano Tomelleri
Dipartimento di Scienze Umane e Sociali,
Università di Bergamo
Piazzale S. Agostino 2, 24129 Bergamo
E-mail: stefano.tomelleri@unibg.it