

[Corporations through the looking glasses]

For an ethnography of the global

Abstract: During a three years investigation in the Research & Development Department of a multinational corporation in Bangalore, I investigated the interplay between processes of knowledge and technology transfer, massive investments in infrastructures, and the modified political and social equilibrium in the receiving local context. The patterns of global expansion drawn by the US-based corporation in India retrace the trajectories of British colonial power. The corporation is described as an actor capable of shaping not only the economic present scenario, but also triggering processes of historical identification and claim. The corporation major transformative actions affect the imaginaries of work, increase salaries and productivity, produce provisional empowerment of local workforce; but they also bring about diffused social resistance and indirectly foster strategies of appropriation. Two examples of “appropriated technology” are described: sustainable and low cost products, designed by the Indian researches in the Bangalore R&D to meet the needs of rural areas and disadvantaged villages, represent the material translation of a local demands into the corporate terms of technology. At the same time, they are presented by the corporation in its world wide campaigns as innovations developed to respond to *green* requirements and new environmental standards. This ambiguity and intentional misunderstanding constitutes the fabric of the ongoing complex relations between the corporation and the “emerging” contexts of its expansion.

Keywords: Corporation, Ethnography, Knowledge, Technology, Work.

The colonial - neocolonial scenario

The contemporary global economic scenario is largely determined by the actions of a small number of private entities, characterised by their multiple capabilities for action and identifiable in most cases with multinational macro businesses, or corporations. Historically originating from countries in the northern hemisphere, and having gradually spread across the globe through macroscopic, widespread and organised production activities, corporations have become part of the collective imagination tied to work and development – just as much as they are the protagonists of the political landscape and stock markets. The global expansion of corporations is a multi-comprehensive phenomenon, the interpretation of which can be confined neither to study of the economic landscape nor to the study of changes specific to modernity: Indeed, the East India Company was, to all intents and purposes, a corporation (Jones 2005), as was the Hudson Bay Company (Galbraith 1957). The East India Company was active until the mid-seventeenth century, while the Hudson Bay Company started its activity at the beginning of the nineteenth century. Their economic action in the management of commercial links and investments consolidated, in time, the political influence of European countries within colonial areas, well before these had been officially actualised as empires (Metcalf, Metcalf 2004; Torri 2000). The commercial activities of the East India Company predominantly characterised Great Britain’s political actions during the colonial era; commercial companies of a similar nature influenced the political strategies of nations involved in the areas of their commercial activities; for decades to come they dictated the map of international relations, determined the nature of the markets and the sectors of production destined to be developed, or to be abandoned (Wilkins 1970,

2005). The development and control strategies of both the global and colonial economies overlapped from the beginning, and laid the foundations for imperial policies whose influence extends into the contemporary epoch.

In the contemporary scenario, the presence of a corporation within a so-called emerging socio-economic fabric can be read as a functional phase in the consolidation of a network of multi thematic relations: while these relations may be typical of modernity, they recall the asymmetrical power structures that can be identified throughout history, reproducing colonial patterns which recall neocolonial schemes. Indeed, the corporation at the centre of my study mirrors numerous patterns that can be recognized during the history of British colonial expansion in India (Arnold 2000): the chronological timeline and phases of its development, the geographical trajectories of its expansion, the development of its productive methods. A substantial transfer of technological and scientific knowledge occurs between the centre and the periphery of the corporation, consisting in an organised and efficient body of practical knowledge, applications, devices and technologies; originally developed and consolidated in the northern hemisphere, they are made available within the area selected for expansion, in short times and with immediate transformative effects. The areas selected for the corporations' expansion initially receive the corpus of knowledge as a foreign entity, which, alongside apparently neutral contents, spreads new rhythms and modes of work, new ways of living and models of consumption, generating new ways of interpreting reality, and potent and pervasive ways of self-perception (Balmer, Greyser 2003). In the present case study such transformative elements were so effective and dominant as to have become some of the characteristic traits of the receiving area, which is contemporary India. Contemporary Indian economy and society are strongly impacted and transformed by the actions of corporations that have selected it as a context for their expansion. The nation shows strong economic growth and uneven patterns of development, deriving by a solid "transferred" capacity for the control of technology which produces "brains" within the scientific field ready to work for the corporation and capable of rivalling the western competitors (Gupta 1998; Keniston, Kumar 2004; Guenergrun, Raina 2011; Petitjean et al. 1992).

In this article I wish to discuss some elements of political and social tension which are produced by the multiple actions of the corporations in the area selected for expansion, that has been identified as a promising economic context and consequently labelled as "emerging".

The corporation at the centre of this study originates in the United States at the end of the nineteenth century; diversifying its industrial production, it expanded in Europe from the second half of the twentieth century, initially focusing on the production of electric motors. The discussion here concerns the opening of the first Indian Research and Development Department, (R&D) started in 2000 in Bangalore, Karnataka.

Bangalore experienced the impact of this productive presence, occurring at the same time with similar initiatives by several Western companies (Bougleux 2015) in multiple sectors of production with crucial importance. Such new presences encompassed and affected all aspects of social life, from the cultural organisation of work to major changes in the urban space, from the impact of new technologies, to the diffusion of new organisational skills: all elements bearing broad repercussions on communities and activities in terms of lifestyles, creation of new needs, and new market demands.

A main task of the paper is therefore to analyse how the multinational influences the social and environmental transformations of the areas where it is received through both direct and indirect actions, which go beyond its immediate but notable impact on the economic reality of the local job market. This approach recalls the terms in which Olivier de Sardan describes the effect of development policies implemented in the very different contexts that he has observed. His investigation offers a detailed interpretation of the processes which transform external economic resources made available in a given area, which often has not demanded them, into internal social resources: the "appropriated" resources may become socially essential, being at the same time limiting and alienating. The opposite process is also investigated, whereby a social resource is potentially converted into an economic one (Olivier de Sardan 2005).

Essentialising the idea of “multinational corporation”

The social and cultural role of multinationals is a much-debated issue, which has raised very well-defined and controversial positions and evaluations. On the one hand, the arrival of the corporation's investments is perceived as a concrete opportunity fostering development, as a means of increasing the number of professional job positions, and as a possibility of stimulating the development of new skills (Markusen 2003). On the other, a well-founded and occasionally “essentialised” representation tends to demonstrate the systematic overlapping of the corporation's policies with the often harmful, and predominantly unsustainable, interests of the usual global hegemonies, immediately recognisable through the analysis of financial flows, and of final payees. The emerging areas chosen by the corporation for expansion are portrayed as weak and substantially passive (Letto Gillies 2005), opposite powerful business dynamics; while corporate programs may plan to involve the emerging area's workers as protagonists, they nonetheless inevitably end up oppressing them by the imposition of foreign standards. Within such scenarios, corporations emerge as always victorious global players, who confront semi-indigenous peoples with exorbitant means at their disposal (North 2006). These semi-indigenous communities, on their side, are portrayed as inevitable losers, despite all corporate efforts; maybe only temporary losers, and potentially beneficiaries in the medium and long term, implying that mere proximity to the driving force of development will eventually yield its positive effects (Dunning 1992). Such portrayals are based on analyses of an essentially quantitative nature, which use cold and objective parameters to describe the articulated reality of the social situation: increased salaries, familiarity with new technologies, an increased spending power for workers - which often coincides with the introduction of new items of expenditure rather than an increase in the level of spending on pre-existing and traditional items (Rogers 1995).

Qualitative social indicators, such as the emotional relevance of a stabilisation of the working relationship, the imposition of radical innovations in terms of organisational culture, the altered management of working times - and therefore also spare time to dedicate to private life - contribute to shape a new sense of self-perception. Fluid, subjective and ambiguous elements are almost entirely absent not only from economic studies carried out by the corporate departments, but also from OECD reports on growth, and therefore from the global political discourse (OECD 2014a, 2014b).

Such a polarised vision of the relationship between the always dominant Western corporations and the always downtrodden indigenous areas of expansion conceals an implicit dichotomy which deserves a deeper look, which is much more subtle, and not only economic: the opening of a branch of a multinational in an emerging country involves the meeting and confrontation of two ways of seeing the world, two systems of knowledge and two ways of negotiating one's relationship with an organisation, with production and with work. On the one side stands the corporate way: technological, material, quantitative and reductionist; on the other side stand local skills: namely sustainable, fluid, holistic and indefinable. In my study of the research centre in Bangalore, I address precisely these tensions, analyzing them with an ethnographic approach that was chosen for its capability of providing simultaneous access to a double level of narration: on one side, letting the actors' voices emerge in their privileged and protected context; on the other, for the possibility to observe the unfolding of relations between the corporation and the local territory directly on the site.

Negotiating the Meaning of Technology

The multi-situated field-study that I have carried out in the course of two and a half years, both inside and outside of one of the world's major corporations, both in its Western locations and in its recently opened Indian locations, has allowed me to identify a more differentiated and complex situation, in which roles, meanings, networks of relationships and, in the final analysis, mechanisms of power, are neither static nor formulaic. The prolonged field-study allowed me to reveal the presence of grey areas of silent negotiation between commercial demands and individual translations. I was able to monitor the activation of strategies of resilience and unexpected cases of appropriation; I witnessed negotiations and redefinitions in the practices of the management of working hours, and in the calling into question of the very meaning of concrete terms such as ‘deadline’ and of abstract concepts such as “growth” and “development”. The mantra of growth is a constant presence in commercial documents, a

kind of obligatory and motivating point of reference for all decisions of an organisational or economic nature. The reception of the term by the Indian workers, however, requires a translation which approaches their lived reality. “Growth” is that of the family, permitted by increased earnings: a “growth” in the chances of marriage, a “growth” in the number of rooms in the home. This is not a matter of real misunderstandings, causing confusion or of clashes: ultimately, the connotations of both business and individual concepts appear convergent. A similar convergent misunderstanding occurs with the spread of portable technologies – mobile telephones and tablets – which are omnipresent and loaned by the company for indefinite periods. On the one hand, up-to-date versions and telephone in the latest model are desirable and coveted objects; on the other, expensive technology provided by the company creates an ambiguous situation that can be interpreted as an accepted exchange between subjugation [to the company] and “prestige” of the costly object [granted by the company]. Additionally, the programmes installed on the loaned device often have usage restrictions and filters; time spent on the tablet could be considered working time, and remuneration may be demanded. These ambiguities foster the development of strategies of resilience: it might become opportune to use the internet away from the company’s wi-fi, although is practically impossible given the poor internet outside the technological campuses. The diffusion of technological devices leads to a vast discussion on the nature of time spent online using company technology: whether this should be considered personal and private, and therefore free time, or as working time, subject to restrictions in terms of time and place, and therefore to be paid.

In such negotiations – most of the times implicit, almost never declared and never conclusive – the high and all-encompassing symbolic value attributed to technology is systematically scaled down and reduced to a mere term of comparison and measure, a relative instrument, technology is just one of the possible options. No longer perceived as a metaphor for success nor as an unquestionable instrument of control over reality, technology returns to the simple status of device; a useful tool for estimating an effect, for measuring the sustainability of a project, or of an artefact; but certainly not an indicator of wealth, nor an indicator of improvement of the workers’ quality of life.

To give a new meaning to the concept of technology, and to reposition the technological object in a sphere of simple materiality endowed with minor symbolic implications requires much more than a temporary compromise, it is rather a reframing of priority and language which must be accepted by the corporation for the continuation of its business activity. It is a dense conceptual transition, which challenges the whole epistemological construction upon which the (presumed) supremacy of the West is based. Reconfiguring the symbolic value of technology is a main step necessitating a discussion about the vision of the world which engages technology in a hegemonic fashion, a vision upon which the shared imagination legitimating the power of the multinational ultimately rests.

In order to demonstrate the importance of the shift in both the meaning and symbolic implications of the idea of technology, and the concrete repercussions of these shifts on the power relationships in play between areas of the world and systems of knowledge, it is necessary to conduct a new qualitative analysis. It is necessary, in my opinion, to emphasise the micro dimension, the dimension of the individual; to concentrate on subjects and on their perceptions; to adopt a small and empathetic view; and, of course, to go beyond purely economic indicators.

The ethnographic study of corporations therefore reveals itself to be an open and multifaceted field, requiring anthropological, economical and socio-political expertise. In my perspective, the corporation represents the ideal context in which to observe the overlap between theoretical representations of the world and much more concrete material constraints imposed by practice and by the confrontation with the organisation. The corporation is the context in which local and global demands meet on a daily basis; it is the physical location where subjective ways of life and professional individual trajectories find an intersection with large-scale decisional processes and work policies and strategies of vast impact, devised to bring multiple areas/multiple subjects of the world into contact.

Fieldwork in the Corporation

The selection criteria upon which the multinational company establishes its own strategy of expansion in areas considered to be emerging correspond to the complex and multifaceted rationales of business policy, which make use of evaluations from heterogeneous sources: analytical and statistical Reports by the OCSE, internal expert

advice, and academic programmes of an economic and historical nature (Dunning, Lundan 2008; Jones 2005) – all documents converging in long-term corporate planning. Nevertheless, after a period of slow incubation behind closed doors, the realisation of the multinational's new location in the area selected for production is actualised extremely swiftly, and constitutes a precise moment of discontinuity for the receiving region, explicit and well defined in time. From the 1990s, in a peripheral zone of Bangalore, linked to the city by an institutional relationship that is not entirely clear, and which gives the area a status somewhere between suburb and satellite city, it has been possible to acquire rural land at a very advantageous price and transform it into a zone of urban expansion. The corporation acquired land and constructed its own buildings from scratch within a short time, as if in a simulation game, linking in to local supplies of electricity and water under advantageous conditions, protected and advised by the local industrial association which had been in equal dialogue with the municipality of Bangalore for several years (Bougleux 2015). The opening of the corporation's branch is announced in advance in the media with a campaign comparable to that of an election; it is highly visible, promoted through large civic billboards which accustom the eye to the presence of their logo. The people shown in these billboards are Indian, appearing very Western in both their dress and their use of mobile telephones - they are wealthy and happy in their ownership of technology. A fast modification of the imaginaries takes place thanks to convincing advertising strategies that introduce new styles and new objects in the shared public imaginary, working as a premise for the material appearance of the corporation; when it eventually happens, the opening of a corporate branch should be a surprise to nobody.

The growth of spontaneous production districts is instead a silent and slow phenomenon. Historically well investigated, and reconstructed as a narrative in sociological and economic literature, the production district is characterised by slowness and graduation, in a process which involves the entire social group for a long time (Gallino 2003). The transformation of a territory into a production district takes place gradually, spanning the working life of at least two generations, allowing for the emergence of a local work culture which, in turn, shapes the cultural profile of the entire community. The gradual emergence of a specific work culture is connected, for example, with the nature of the professional educational programmes offered by the schools of the given region, just as it also contributes to the shaping of the network of social relations of linked industries. The presence of the production district renders the region well known for its specificity, even beyond its immediate borders, and therefore makes it attractive for further developments in fields similar to that of the original development.

By contrast, the opening of a production plant by the commercial agency or by the research centre of a multinational introduces, within a short period, substantial new elements constituting a sharp rupture with the original local work scenario. In very short periods new methods, unknown professional languages, linguistic content and materials are introduced in the receiving contexts, and they remain alien to the local socio-economic tradition and culture of work. The professional skills demanded by the multinational can actually be found anywhere, in the sense that they are the result of standardised training programmes. The multinational is therefore never tied in any way to the specific region; in fact, the reverse is true, and the territory transforms in order to conform to the demands and work practices of the multinational.

In the global expansion process of a corporation, two types of different temporal phenomena coexist: firstly, those which are slow, gradual and long-term, resulting from the decisional processes of the administrative board, from analyses of global situations and from commercial planning; secondly, those which are fast, operative and striking, which the corporation itself triggers when decisions eventually mature into operative actions.

The operation of expansion is realised with broad deployment of material and media means, capable of proposing/imposing a new and artificial image of itself in the selected region. The traditional character of a socio-cultural area, its productive history and its specific economic vocation can quickly be obscured by pervasive media discourse on modernisation, which the corporation automatically carries with it. But the high speed of the impact is not free from collateral effects and backlashes.

In numerous cases that I have been able to observe in the corporation branches in Bangalore and Allahabad, micro processes of resilience, temporary adaptation, and micro-economic transformation materialised straight away (Bougleux 2012a, 2012b). To give just a few examples: a good ability to use the different time zones between various global locations to negotiate the terms of a deadline; the competition among foreign multinationals

appropriated and exploited, in order to gain advantages during negotiations regarding salary policies; and a relaxed attitude with respect to the delicate confidentiality policies of corporate research.

The community's fast reaction and its capability to enact creative adaptation strategies are not only unforeseen, but neither can they be codified in terms of the usual corporate discourse. Communities' responses and reactions remain absent from tables and periodic reports on "growth", as they continue to escape quantifiable parameters.

Overall, I could observe that the socio-economic changes induced in the area of development have a very early and immediate impact upon the rationales of commercial planning, which are actually intended to unfold over longer periods and that, instead, are made ineffective and have to readapt in the short and immediate term.

The expansion policy, and, after an initial phase, the integration policy of the corporation in the region must continuously be updated on the bases of new changing elements transforming the local reality – a reality which is continuously affected by the changes and actions of the corporation itself. It is important to emphasize that the social changes triggered by the presence of the multinational correspond, in terms of practices and time-scales, to rationales which are always alien to its capability for social analysis, thus creating a situation of recursive instability and pre-crisis which opens the door to unexpected developments. The corporation emerges from this description as a subject substantially able to weaken itself.

The simplified and "essentialised" vision of the area chosen for expansion, used extensively in the commercial discourse concerning development, is necessarily overcome and problematised thanks to the dynamic that the corporation itself has contributed to set in motion. It is not, therefore, a stretch to assert that the expansion of the multinational is a negotiated process, in which the action of local participants, no longer conceivable in the usual reductive terms of 'subordinates' and 'losers', is realised through the widespread, if not systematic, influence of work practices. Theoretical intentions collide with capacities for practical action; long projection periods coexist with rapid periods of action, allowing for the emergence of a small-scale negotiation space which also assumes an identificatory dimension. Women wear saris in the office; during meetings Hindi and Kannada are openly spoken alongside English; and email requests which seem too pressing and too difficult to fulfil are not acknowledged, and are effectively boycotted. Press campaigns in the public space consequently adapt, revealing a human situation beneath the company's dominant logo which is less homogeneous, less Western and less 'yuppie'.

The actors occupying the lowest positions in the corporation's power discourse become the authors of strategies of resistance/existence, whether on an individual basis or on a micro-collective basis, capable of influencing the corporation in a negotiation which reassesses the very meaning of its presence in the region. In the blurred margin between standardising commercial policy and the widespread action of a territory which resists homologation simply through the posing of issues of coexistence, lie all of the conditions for a new and local definition of the imaginaries associated with the corporation, and for some tentative forms of appropriation - finding not only material but also epistemic strength to undermine the productive corpus of the company as a whole.

The corporation's field of action is geographically vast and operatively multifunctional, and yet for the purposes of this paper it can be regarded as well defined, in the sense that it contains precise delimitations responding to the logic of multiple views. The very concept of "the corporation" explicitly recalls a coherent body ("corpus"), and denotes a systematic combination of heterogeneous entities closely bound to each other by certain shared features and separated from the rest, an undifferentiated external context showing no conceptual relations with it. The possibility of introducing various delimitations to the vast concept of corporation contributes to contain the research within reasonable thematic and spatial margins; in other terms, the corporation is a well-defined object of ethnographic research.

Firstly, the corporation has a physical location, its own spaces, symbolically marked and globally well recognised: protection fences separate the corporation properties from the public space, sometimes in an excessively marked fashion; security controls and luminous inscriptions are placed on top of the buildings and their entrances, recalling the banners of shopping centres more than those of an administrative seat. Access to internal spaces is always gained through mediation (and negotiation, in my case) and is not guaranteed for anyone without an accurate check of personal identity. Broadening one's gaze, it can be seen that the whole of the outer urban space which comes under the authority of the corporation is, in fact, well enclosed and protected. Green lawns without plants, sterile and geometric pavements, constitute a kind of protective empty space, a well-kept and always illuminated no

man's land, which encircles the site's buildings and separates them from the rest of public space. The perimeter of the land under the corporation's authority often coincides with a legal border, at least in terms of working rights. This overlap of physical and metaphorical borders occurs when the branch is located overseas with regard to the corporation's headquarters: the working rights remain those of the country where the headquarters are located. My study was carried out in one of such cases: I studied only branches located overseas, both geographically and legally distant from their American seat, and thus very well enclosed and protected.

The borders separating the area of the corporation from the surrounding urban spaces cannot be negotiated. The corporation buildings position themselves inside the public spaces as a sort of protected enclave. Its material and metaphorical separation is ensured by the discourse on global power fuelled by the multinational with its propaganda, as well as by the severe surveillance ensuring its physical separation: the site's fence becomes the tangible expression of the disparity of such global and material power. In the context of an ethnographic study of a corporation it is therefore possible to speak of "internal" and "external" spaces, leaving very little ambiguity.

In the second instance, the internal spaces of the corporation have inhabitants, or rather citizens, endowed with a legitimization: the workers. The citizens/workers are certainly not all equal; on the contrary, the majority of the relationships which link them in networks are strongly asymmetrical. The presence of the hierarchy is pervasive and tangible everywhere: from the in/formal ways of addressing people in conversation, to the differentiated permissions of access granted to certain spaces, archives and databases, to the scaling levels of authority symbolised by different coloured badges, which must be worn by all citizens all the time. Endowed with great symbolic meaning, the commercial organisation constructs its very structure through the imposition of hierarchies of responsibility, of experience, of role and of rights. The various badges worn visibly on the overalls allow or prohibit the handling of relationships with the external world and with sensitive information; most importantly, they denote differences in salary. Hierarchical organisation constitutes a powerful figuration of the entire mechanism of corporate operation: the company coincides with its hierarchy and it is identified with it. A functioning hierarchy embodies an idealised power of control over reality and over its variety; an enforceability rooted in taxonomic, nomothetic and organisational categories (Morgan 1997; Piccardo Benozzo 2003).

The workers of the corporation therefore give life to an extremely organised and heterogeneous community in fact and in law, implicit in some of its elements and explicit in others. Yet, despite the heterogeneity, the category of the workers, taken in its entirety, constitutes a clear category of inclusion/separation between us, the outsiders – visitors, journalists, scholars – and them, the insiders – employees, workers, researchers and managers. The most culturally interesting aspect consists in the observation that even the most accurately structured hierarchy becomes a figure of secondary weight opposite the clearer and more excluding character that identifies the extraneousness of the researcher. The notion of 'placement' in a level of the hierarchy appears to be very well internalised by workers of different classification levels; but a prominent sense of belonging in the hierarchy, identified with the whole company/community, seems to have been even more internalised. In relation to the external researcher a form of distancing takes place, a stigmatisation of the outsider, which cancels out the hierarchical structure and pushes the role effectively occupied in the organised taxonomy into the background. Very often, one who claims to belong to the hierarchy as an identifying feature occupies a subordinate role.

The researcher who enters the corporation, therefore, has, at least at first reading, no means of camouflage at their disposal: their position is subordinate in as far as it is exterior to the group, it is inescapable and immediately recognisable. Even the workers I did not know personally, those not directly involved in my study or observation, seemed to be aware that they occupied a privileged role compared to me, as someone who did not belong here – albeit one who had become a casual and common sight, endowed with pass, badge, and a whole array of seemingly minor material devices, but which had a substantial symbolic power.

Luckily, the strength of the intersubjective dichotomy between insider and outsider, between those who belong and those who do not belong, contributes to construct (together with the influence of space) a well-defined object of research for a researcher who approaches the study with the usual qualitative ethnographic instruments.

Public opinion and the corporate “green policies”

Anthropologist Marietta Baba speaks of applied anthropology when «empirical, theoretical and relational methods produce change within specific cultural systems, through the construction of [systems of] data, the beginning of direct actions and the definition of possible political initiatives» (Baba 2005: 226).

In my case study, the multinational occupies the role that Baba calls the “specific cultural system”, while the practices of resilience and retroactivity in the area in which the multinational operates are potentially “the direct actions through which to seek to induce important forms of change [in the multinational]”.

The applied dimension of research in the corporation emerges when the process of expansion implemented in the emerging area – initially planned in standardised terms, identical for all of the corporation’s actions on a global scale – is modified in peripheral branches on the basis of local factors and necessity to re-adapt to the emerging area. In this paper I seek precisely to put into evidence the transformative action of these areas opposite the company, demonstrating the unplanned reciprocity of such transformative actions.

A more general aspect emerges here, which gives us access to an epistemological interpretation: the workers I monitored through observation demonstrated an ability to use the well-structured organisational network of the multinational for their own purposes as an open infrastructure of communication: the corporation, “defeated” in its homologising purposes, starts being experienced as a relational infrastructure, which, in the first place, transfers skills, and then soon after lets these skills evolve; the corporation as an evolutionary infrastructure, capable of triggering the emergence and generation of original knowledge.

The corporation thus appears to be at the mercy of its capacity to convey signals which are not really under its own control, in the same way that a virus propagates itself within a defenceless organism. The corporate communication network becomes therefore a subject of great epistemological and empirical relevance, which is referred to in literature as a *large knowledge infrastructure*, characterised precisely by the non-linearity of its heterogeneous patterns of signal propagation. In it, the epistemic disruptions produced on the margins can meet, or create, the conditions required to trace back the informative and productive network, infecting it and appropriating it for new purposes (Edwards et al. 2013). Some examples of this dynamic relevant to my case study are explored in detail in par. 4.

This is an exemplary case of retroactivity from theory to practice, where *theory* is understood as a capacity to devise an innovative project, appropriating the mechanisms of commercial infrastructure, and *practice* is understood as a concrete and transformative capacity, which does not only change the shape of production, but also shapes the political scenario where this transformation takes place (Herzfeld 1997, 2006).

One more case of application takes place when newly designed products proposed by employees working in the peripheral branch succeed in getting off the ground, even though they are expressions of the thoughts of a minority within the company culture. In our limited case, the minority project becomes strategic thanks also to the pressure of public opinion. Precisely this has occurred with the *green* production line, which is initially a feature of the corporation’s public image purely for commercial reasons, but which is progressively transformed into concrete proposals and actions.

It would finally be useful to discuss whether one can use the term ‘applied’ to describe the effect of my external knowledge, which, contributing to the construction of an awareness of political position among the workers in the R&D where I carried out my fieldwork, may have activated mechanisms of self-recognition and processes of empowerment. Such forms of self-awareness could lead to the planning of deliberate actions intended to modify production lines, or to forms of appropriation of the commercial communication network carried out with the specific aim of propagating non-centralised information. This hypothesis of deliberate appropriation must be examined in depth.

After the signing of the Kyoto Protocol, and its successive problematic ratifications, rhetorical reference to a sustainable approach towards production started to become a strategic element supporting the global expansion of corporations; today, referring to concrete steps taken in favour of sustainable policies is an unavoidable choice. Even the strongest companies, namely those which are least susceptible to the pressures of shifting public opinion, must be able to provide concrete and documented information supporting their narration of a sustainable business, ready to stand up to the inquiries of ethical and environmental experts. In order to obtain the minimum political

consensus necessary to expand in a given emerging area, this aspect of communication strategy is obligatory. A completely different - and very expensive - level of engagement is that required to implement green technology in practice, especially when this is not demanded by any concrete customer, and when market responses cannot be predicted. The examples described in the next paragraph sit within this category of occurrences: green technologies emerge from the new configuration of work in the Indian branches of the corporation, conducted by local researchers and local workers,

Reversing Production Patterns: Rhetoric and Objects

Once my access to the spaces had been negotiated and I could observe the mechanisms involved in the exchange of expertise in the laboratories of the corporation - that is, when my position as external had become more nuanced - I was able to follow first-hand how the roles and actions of the workers change. I especially focussed on those with more theoretical roles, such as the programmers and researchers, when they shifted from positions of mere executors of centralised direction to active proponents of new processes and new products.

The corporation produces advanced technology, including solar panels for industrial use. Technologically very advanced, these are perfect objects, but also very expensive, heavy and bulky. Some years after the launch of local research groups in 2001, the R&D in Bangalore, populated by commuter researchers from the rural regions of Karnataka, began to develop small solar panels which are light and portable: low cost, light and resistant, suitable for installation on the fragile roofs of family homes. They were devised not to illuminate a city, nor even a block of flats, but to bring light into a room and to recharge a mobile telephone (Bougleux 2012a). The role played by the first proponents of this innovation deserves to be highlighted: acting as both global and local researchers, they achieved a mediation between geographically distant areas, and turned it into practical implementation using technology as a vector.

Over the years the corporation's management has met the challenge of its peripheral research centre, and, through a highly propagandised phase of prototype testing and redesign, has launched the idea on a large-scale. The mini solar panel at low cost is presented as the result of a great investment in research and sustainable technologies, as the successful story of the green production line, it is publicised emphatically and enthusiastically; in reality, the mini solar panel has emerged as the unexpected result of a compromise between local inputs, rural demands, market constraints and global skills.

Thanks to the success of the mini solar panel the corporation is able to maintain its promises regarding green engagement, and start aligning its public narrative with reality. As early as 2005 the corporation was already engaging publically in sustainable production, launching a 'spin off' dedicated to implement environment defence policies at corporate level, *Eco-sustainability*; with a virtual seat in New York, low funds, no workers and a great number of advisors. Eco-sustainability is principally a container for projects: it collects more or less bold ideas on urgent environmental issues, as CO2 emissions reduction strategies', projects for recycling of water, and protocols to control greenhouse gases. It collects an interesting variety of projects, but few are practically feasible products; principally for reasons of cost, because of uncertainties regarding market impact, or because they involve ideas protected by foreign licences, which can be acquired only with a large increase in costs. Eco-sustainability is not a peripheral branch in the corporate organisational chart, its is fact highly central; it is a direct emanation of the American Management and Planning offices, and therefore the commercial entity publically taking credit for the promotion of innovative mini solar panels. Something has gone wrong in the final phase of the process of technological appropriation, on the side of the Indian branch: namely, the crucial phase of public recognition. The corporation in its entirety can certainly boast about its innovation, but internal recognition is deliberately directed towards the wrong department. Concrete success consists in the small solar panel being on the market, at a cost of only two hundred dollars, and labelled with the brand of the multinational, meaning that the product is recognised worldwide as being safe and reliable. Indeed, the mini panels are widely purchased, and within a short period they gain enormous commercial success – even if success is geographically limited, and unfortunately only tacitly accredited to Bangalore.

An analogous example of technological appropriation is the implementation of the production of regasification

cells that use domestically-produced biological waste to produce cooking gas renewably. Producing cooking gas locally, in villages and individual houses, eliminates the need to acquire and transport at great cost gas canisters which arrive from afar, via roads in poor condition, and which are then not disposed of. The innovation introduced by the R&D in Bangalore consists in the development of an extremely reliable electric apparatus adapted to familiar security standards and meeting the vital demand of requiring practically no maintenance. Of course, in the corporation's research centre, the expertise that could lead to the realisation of electric micro-networks with a good thermal capacity and connected to gas sources, was already available; but the demand arriving from rural areas, through the mediation of local engineers employed by the R&D, expresses more specific needs, and calls for the development of focussed, small scale, sustainable technology. The corporation is unexpectedly turned into the addressee of small and real communities desires thanks to unexpected mediation provided by its local researchers.

The demand for technology expressed in a rural area is not classifiable within the categories formulated for the study of *customer culture*: the demands of this part of the world can be transported to the interior of the corporation, tacitly, by the workers themselves, as an unplanned effect. The development of a response in the form of new technology represents a reinterpretation which entails the described appropriation phase: standard findings becoming part of characterised, 'personalised' implementations.

Both examples, having domestic consumers as ultimate beneficiaries, are also paradigmatic of an evident transformation of the links between production and market: a relation that can be defined as a 'double exchange' emerges, mediated by the workers who occupy the so-called «third space of knowledge» (Bougleux 2012a: 54-55). Between 2006 and 2009 the corporate research sector which underwent the most relevant innovation was that of medical technology, with the development of small diagnostic imaging machines, more or less portable devices. Originally developed to meet the demand of doctors who operate in rural and difficult to access areas, without electricity and internet connections, the low-cost, portable ultrasound and CT machines have performed well: they were so effective, environmentally friendly and precise, that they have been eventually introduced and commercialised in 'our' part of the world. Initially imported back into the West as a test, they soon took their place alongside traditional machines in Western hospitals, burdened by cuts to healthcare spending, especially the years of economic crisis in the United States. Aware of the revolutionary, and not merely symbolic, importance of this process, which retraces in reverse the traditional current of investment and international commerce, a new term has been coined at the company level, specifically conceived to define the new scenario of emerging and multilocal development. The term sounds at once comforting and provocative: this is "Reverse Innovation", a rethinking in inverse terms of the routes and trajectories of the development of technology. The success of Reverse Innovation is surrounded by crisis scenarios which find themselves converging - in an historic occasion which may not be entirely surprising - with the needs of a poor and marginalised consumer.

The greatest surprise lies in the observation that this form of innovation reveals itself to be of primary importance precisely in that part of the world which, until yesterday, seemed to be free of spending problems, and ready to invest without limit in ever more expensive technologies. The beneficiaries of the Reverse effect of the trajectory of development are – not occasionally, but invariably – those countries and those large, and first-world medical infrastructures forced to confront the consequences of their own economic mistakes.

Reverse Innovation is the effect by which transformative phenomena spread from the periphery towards the centre of the system, exploiting the corporation like a *large knowledge infrastructure*. The spread of development from the periphery towards the centre constitutes an inverted case of the stable tendency of interpreting development and economic trajectories as flows always crossing the globe in the same direction, from north towards south, from (economic) centres towards (emerging) peripheries. The *knowledge infrastructure* is necessary in order to succeed in reversing development trajectories; furthermore, the success of the products of Reverse Innovation concretely uncovers uncomfortable tensions in the market policy: research does have high costs, but its results may arrive from unexpected locations, and lead to the attainment of economically accessible technologies; finally, economically accessible technologies are suitable long-term investments (Govindarajan, Trimble 2012).

At this point, we must evaluate whether the described cases can be interpreted as a success in the perspective of translation and of appropriation, or a gift to the multinational in terms of profit: how to read the whole Indian operation of planning for new technologies; the increase in knowledge diffusion and in the capability of

intercepting local needs; the commercial success of the outcomes of combined creative efforts – all that have led to the realisation of sustainable green products?

I asked myself, therefore, how the workers of the R&D experience the phase of consolidation of their work: whether what prevails is identification with the commercial narrative, which tells the story of a corporate success, or the feeling of having been in some way the victims of credit denial and theft of intellectual property. Obviously the corporation is by definition the owner of all licences, results, hypotheses, and also of all wastes and errors realised in its research centres. But unlike Western branches, where a strong and diffused identification with the commercial trademark can be observed among the workers (Stuart 2002), including a sense of belonging to the company and pride of the brand as if it were their own (Powell, Balmer, Melewar 2007), in the context of Bangalore no similar mechanism is perceived throughout my observations.

Any symbolic relation with the company is weak or totally missing. The Western brand remains far from the Indian emotional scenario; it does not belong to it, it does not belong to any shared imaginary. Working for one of the world's major companies does not represent any added value in terms of self-representation: rather, it represents, if anything, a chance for liberation, an opportunity to appropriate skills and competences which, later on, will be invested in new ways within the Indian context, in a local company or in a new 'spin off'. It is paradoxically this considerable emotional and psychological distance existing between workers and their company that makes the lack of recognition of credit less serious and less severe.

Conclusion

One of the focuses of my observation of the corporation's R&D was the emerging and non-codified role that they have been increasingly occupying in the socio-economic context where the corporation undertakes expansion. The emerging and unexpected outcome consists in the concrete capability developed by the R&D of interpreting local needs, expressed in remote and rural contexts far from technology and from production, into the terms of global technological responses.

The young engineers, researchers and technicians whom I met in the corporation's laboratories belong simultaneously to two very different and distant worlds, which appear to be overlapping and interdependent. They have completed their studies in universities organized according to the Anglo-Saxon model, they live in large cosmopolitan cities, and they work for global multinationals; but they also belong to the rural reality where the family still resides, far from road and rail links, without electricity and still marginalised by the economic and social macro-processes which are transforming an ever greater part of India. The work of the young engineers within the R&D is a *de facto* intermediation, a comprehensive translation between the languages, rationales and needs of two ways of existing and thinking, which are much more linked and interdependent than much of the literature on Indian globalisation would have us believe. In this scenario the corporation plays an interesting and ambivalent role: if, on the one hand, it appears in the region as an entirely hetero-determined entity, only responding to central and profit-orientated plans, it also finds itself in the position of providing the workers and researchers with a well-tested network of communication channels, and a series of skills going beyond merely commercial applications, which can be redefined in unforeseen ways.

The redefinition of the corporate R&D occurs via processes which are slow, gradual and not dramatic, which do not provoke reactions of refusal or rejection, but which rather recall the rhythms and patterns of a symbiotic relationship. The extent of the appropriation's success is also evidenced by the smooth reaction of acquiescence which the corporation demonstrates, at least as far as I was able to evaluate within the time scale of my observation. We must establish whether such appropriation is of an epistemic, functional, emotive kind; whether it is occasional or structural. Certainly this is no economic appropriation, and this remains the most limiting factor, in terms of both politics and ethics, in this entire discussion.

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