

Beyond geo-sectoriality: the productive chorality of places *

Giacomo Becattini **

ABSTRACT: This article discusses the question of what should be the proper conceptual framework for analysing productive phenomena. The cause for reflection on this topic stems from a proposal made by researchers from the Bank of Italy (Alampi *et al.*, 2013) to analyse productive phenomena through the lens of an integrated geographical and sectorial perspective. The author proposes a reversal of the approach, arguing that the starting point for analysis should be the assumption that every place — as defined by a combination of natural conditions and the outcome of history — has at any given time a specific «productive chorality». This productive chorality is not merely derived from the technical, spatial, and cultural proximity of businesses, but also, and more importantly, from the cultural homogeneity and congruity of all the inhabitants of that place, who contribute, positively or negatively, to local production.

JEL Classification: B31; L11; R11.

Keywords: industrial district; geo-sectoriality; productive chorality; local development.

Más allá de la geo-sectorialidad: la coralidad productiva de los lugares

RESUMEN: El tópico discutido en este artículo es cuál debería ser el marco conceptual adecuado para analizar los fenómenos productivos. La causa para reflexionar sobre este tópico deriva de la propuesta hecha por algunos investigadores del Banco de Italia (Alampi *et al.*, 2013) de recurrir al concepto de «geo-sectorialidad productiva», i.e. una clasificación mixta, geográfica y sectorial, de los procesos productivos. El autor propone un cambio de enfoque, sosteniendo que el punto de partida para el análisis debería ser el supuesto de que cada lugar —definido por sus condiciones naturales y el devenir de su historia— tiene su propio grado de «coralidad productiva» en cada momento dado. La coralidad productiva no se basa meramente en la proximidad técnica, espacial y cultural de las empresas, sino

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** Università degli Studi di Firenze. E-mail: giacomo.becattini@unifi.it.

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también y más importante se basa en la homogeneidad y congruencia cultural de todos los habitantes de este lugar, que contribuyen, positiva o negativamente, a la producción local.

Clasificación JEL: B31; L11; R11.

Palabras clave: distrito industrial; geo-sectorialidad, coralidad productiva; desarrollo local.

1. Introduction

In a recent conference on «The transformation of local production systems», organized by the Bank of Italy together with the Department of Economics, University of Bologna, researchers at the Bank of Italy (Alampi *et al.*, 2012) coined the term «productive geo-sectoriality» to refer to the possibility that certain production processes may be affected by combined sectorial and territorial influences. This new conceptual framework would make it possible, in their view, to develop the economic reasoning essential to understanding aspects of post-Fordist modernity, especially, but not exclusively, in the Italian context.

The proposal goes, in my view, in the right direction, but it also raises, I think, some problems, which I am going to discuss.

2. A quantitative test of the district-effect

Let us make a necessary step back. In the early 1990s, Luigi Federico Signorini, a regular visitor to the *Incontri sullo sviluppo locale di Artimino* (Becattini and Sforzi, 2002), had doubts about the validity of the *totem* honoured there: the concept of the «Marshallian industrial district».

The widespread belief amongst Artimino participants in the virtue of the industrial district could not but irritate a researcher like him, someone from the strict Research Department of the Bank of Italy. In short, Signorini suspected that behind the discourse about the industrial district was concealed a defence of the perverse myth of «small is beautiful».

In fact, something like that was indeed contained in the discourses on the industrial district, but not in the sense that enterprise smallness in itself gave competitive force to the district. Rather —as we realized later— the competitive force came from the «intimacy of ties». You should not say, therefore, «small is beautiful», but, rather, «intimate is beautiful».

Signorini, then —as he confessed later— pursued the goal of demonstrating that the deity honoured at Artimino existed only in its cult followers' fantasies.

However, just as when the Prophet of Israel was commanded to curse his people, but out of his mouth came only words of blessing, so Signorini, after carrying out

several attempts of statistical testing, had to recognize that the salvational virtue of the districtual divinity was, on the whole, confirmed (Signorini, 1994). Thus was born, in the halls of the Villa Medicea at Artimino, a strand of studies and ideas, to which the current formula of «geo-sectoriality» can be added (Sforzi, 2007).

3. Theoretical thinking and observation of facts

One more step back. I arrived at the concept of industrial district—the «cause of the scandal»— via a dual route:

- by intuition, so to speak, through a study—unbiased to the extent possible for a professional economist in the 1970s (only those who lived those years of scientific and ideological struggle can understand fully)— of post-war Italian industrial events, especially those occurring in Tuscany (Becattini, 2007);
- theoretically, based on studying Marshall and, in particular, his *Economics of Industry* of 1879, and also the 19th century English industrial context (Becattini, 1975).

It has to be added that Sebastiano Brusco, along with his Modena associates and American interlocutors (Charles Sabel & Co.), had also come to recognise the significance of the industrial district phenomenon, through ways that were complementary to my own, but different, pivoting in his case on productive flexibility (e.g. using numerically controlled machines) required by post-Fordist economic affluence, instead of through the productive integration of a plurality of firm processes (Brusco, 1989).

Obviously, I welcomed the «scientific confirmation» of Signorini with understandable satisfaction, to the extent of hosting his study in the first issue of the journal *Sviluppo Locale* (Becattini and Sforzi, 1994).

4. The constituent period of district studies

And now, let us make a side step! The constituent period of the strand of studies on industrial districts (1978-1990) variously intertwined with studies on clusters by Michael Porter (Porter, 1990) and also with the birth of the so-called New Economic Geography (NEG) by Paul Krugman and associates (Krugman, 1991).

This convergence of three distinct strands of research (industrial districts, clusters and NEG) have produced many studies, all intended to better ensure the presence, and to better measure the importance, of the territorial concentration of productive activities, examining, in short, the equivalent of the district-effect of Signorini in the most disparate historical and geographical contexts.

For example, more recently, a comprehensive district-oriented set of works and critical analysis can be found in the *Handbook of Industrial Districts* (Becattini *et al.*, 2009), wherein eighty scholars from all parts of the world provide an overview

—certainly incomplete, but already impressive— of the multitude of researches fed by this rethinking of economic analysis.

Despite the large number of studies on industrial districts, clusters and NEG, the vision of the production process as being carried out mainly inside an individual enterprise, or even inside an individual factory, has been, in the vast panorama of economic studies, clearly hegemonic. The proximity towards one another (or alternatively remoteness) of local firms involved in a given industry, appears in the aforementioned economic studies only as an additional feature, quite casual, and therefore negligible at the purely theoretical level.

5. Marshallian digression

Let me make, at this point, a brief digression. The inclusion, by Alfred and Mary Marshall, of the industrial district concept in the toolbox of the economist, is due, to one quarter part, so to speak, to their re-elaborated version of the strand of thinking on history headed by Henry S. Mayne (1871) at Cambridge University; to a second quarter to the Marshalls' acceptance of the Spencerian «logical machine», according to which social evolution would experience alternating trends towards more, or less, specialisation and integration (Spencer, 1863); to a third quarter to the idea of «construction of territory», e.g. as realized in the *Isolated State* of Von Thünen (1875), which exerted so much influence on the economic education of Marshall; and lastly, to a final, but decisive, quarter to the direct observation, by the Marshall couple, Alfred and Mary, of the forms of industrial development in the English Midlands in the 1870s (M. P. Marshall, 1947, p. 43).

It is thanks to the influence of these four cultural impulses that Alfred and Mary Marshall conceived the idea of industrial district as a category directly useful for explaining the English industrial phenomenology of their time. We must add, however, that the Marshall of the *Principles of Economics* (1st ed. 1890, 8th ed. 1920) is less explicit about the above influences.

6. Productive geo-sectoriality: yesterday and today

It is at this point in history, that is, now, that —after more than a century— appears the contribution of the researchers of the Bank of Italy, who consecrate the culmination of several years of internal reflections in the Research Department of the Bank by proposing the term «productive geo-sectoriality». This refers to the idea that territorial proximity of firms belonging to the same sector has a positive effect on the production process, reducing its unitary cost. This what you might call a Solomonic solution claims that certain sector-place combinations lie behind the competitiveness of production processes. These scholars, clearly, do not want to give up the firm as the unit of production, but at the same time they want to incorporate the district-effect.

The economics profession has rediscovered a truth detected and made explicit in 1906 by a student of Marshall, D. H. MacGregor who wrote: «Such organization can fairly be called «collective» in regard to production; for although each firm or establishment remains independent as to its internal affairs, yet all firms make common use of certain trade economies whose force is greatly increased by centralization [...] these economies and means are external to any firm, but they unite it in a positive cooperation to other firms». And he closed: «The cost of production of an individual establishment depends on other establishments, in a manner which implies three variables. It is a function of the general industrial organization of the country, of the organization of a particular trade, and of the organization of a special centre for that trade» (MacGregor, 1906, pp. 26-27).

The solution that we are now being offered with the introduction of the concept of geo-sectoriality is one of a sectoriality sensitive to spatiality. And this is so not only because of the irrelevance of transport costs in the concerned area, but also because of the manifold effects of an operational proximity and its influence on the unitary cost of production typical of the area.

The proposal of the scholars of the Bank of Italy is certainly interesting and, in my opinion, correct, but perhaps misses a crucial point revealed by industrial district studies, which is that the «plus» of productivity provided by the industrial district does not derive from mere spatial proximity (the proper sense of the geo- of the definition) of firms in the same industry, but from the formation of a «special production environment». Production is embedded in the local production community as a whole (including families and other institutions) and it is through the interactions between the special production environment and the «internal production environments» of individual businesses that the district-effect is produced.

We thus find ourselves talking about the Marshallian «industrial atmosphere», which Krugman, by rejecting the idea of «non-monetary external economies», attempts to exorcise, but which theorists of districts and clusters, on the contrary, are happy to use, albeit in a different way and with a different awareness.

7. Reversing the interpretation

The writer of this article believes the causal sequence should be reversed. The production of any good —which involves what is done in the factory and what is done in a place in hours formally free from work— is, ipso facto, social. I propose to conclude the long march «from the district-effect to geo-sectoriality» by reversing the interpretation. Instead of starting from the idea that labour productivity depends on the sector —an elusive and indefinable entity, strictly speaking, as I tried to show half a century ago (Becattini, 1962)— and is then influenced by the proximity of the firms, we say that it depends on the local environment in which the firm operates jointly with the techno-commodity characteristics of the productive process. These features may be more or less sensitive to the effects of enterprise proximity in a territory.

A clear example of what I mean by labour productivity being in part dependent on the local environment can be seen in the industrial district of Carrara marble, where the fate of the marble, in all its dimensions, pervades the minds of all the inhabitants, making it almost a secular religion. What happens to the marble is determined, in part, by the culture of the local people.

The conclusion I reach is that the correct starting point for productive analysis should be that every place, as fashioned by Mother Nature and also by the events in its history, has, at any given time, a degree of —so to speak— «productive chorality», based not only on the technical, spatial and cultural proximity of the firms, but also, and more so, on the strength of the uniformity and congruity of the culture of the people and families who live there.

In other words, I say all the inhabitants of a place are always engaged «chorally» (aware or not) in the production of things for local consumption, and things for sale abroad. This assumes that some of them do not always participate, explicitly, in the productive effort, just as some choir members who —in a certain interval— while not singing are still participating in the choir.

8. Productive chorality

My idea of productive chorality, barely sketched, is something constituted by a thousand institutional figures (ranging from families to firms to local government to religious rituals, and more) and by «cultural» entities (e.g. para-productive institutions, social care provision, sports activities, and more), the total making up a cultural background (in the anthropological sense), and from which depend and on which also are projected, people's individual decisions, including economic ones.

That to be explained by cold «geo-sectoriality» is therefore understood here rather as the economic effect of a warm «civil and productive chorality», often present —although in varying degrees— in the social life of places of production. Is it not logical —I wonder— to imagine that all the inhabitants of a place contribute, positively or negatively, in every moment of their daily lives, to local production (a little like all the choir members, even those who are silent, contribute to the choir)? Of course, a member's contribution can be zero or be negative (the wrong note!).

My proposal may seem trivial: a terminological innovation as simply a verbal expedient aimed at encouraging the reader to not forget the historical and geographic placement of production processes, as, unfortunately, tends to be typical of the «representative economist» of our times, which results, as everyone knows, in the location of analysis in a perspective which is first of all, or purely, sectoral.

But when it comes to defining the so-called «industrial sector», on whose thin shoulders rests so much of current economic discourse, we are faced with insoluble classificatory problems, such as whether the manufacture of rubber boots should be classified as belonging to the footwear industry or to that of rubber? Or we see reference to a «luxury goods sector» which encompasses diamonds, luxury class automobiles,

«exclusive dress designs», sea cruises, and more. Such diversity in rationales for classification undermines the value of any conclusions to be drawn from sectoral analysis.

9. Going beyond the sector

So, with what can we replace sector, a category which has been employed in ninety percent of the studies of industrial economics?

Let us first consider the nature of the problems «the sector» was called on to solve: to isolate, to study *in vivo*, a set of production operations characterized by a common strain of knowledge and/or aimed at meeting a certain need or group of needs. Such definition is easy to say but harder to operationalise, due to the elusive and ever-changing problematic of needs, or to an inherent instability of the production mix, especially in today's society.

Question: should a sector cover all firms producing goods that meet a certain type of need, e.g. the footwear industry; or all firms who work a certain raw material, such as, for instance, the rubber industry? I do not have an answer.

I will not belabour the point but I will just say that «simple classifications» do not lead to the goal of an efficient allocation of firms to appropriate sectors when all conceivable configurations of productive phenomena are taken into account.

The «poison of the argument» —if I may say so— lies in considerations seemingly marginal, but in fact substantially central, to the analysis of production.

Everybody agrees with the concept that production requires a plurality of cooperating parties, for example, in the workplace (including possibly in the open such as a vineyard), which implies, very often, a certain proximity of residence of the families of workers of any given firm or group of firms to the workplace. Let us ask ourselves: does proximity of the workers' houses to the factory affect job performance? In a superficial examination the factory may look as a fortress isolated from the houses of its workers, deriving its efficiency only from its methods of production. In fact, mainstream economics, at least in its didactic expressions, tends to isolate conceptually, in regard to analysis of the facts of production, the conditions of the productive process «inside the factory» from what happens outside, in the portion of the society that hosts the firm —with an implicit assumption that what happens «in the vicinity of the firm», is irrelevant, or almost, for the production process in question.

No economist denies, of course, the importance, for example, of the territorial distribution of the family settlements of the firm's workers (the analyses of commuting *docet*), but many economists believe it safe to ignore —at least to a first approximation, which is often not followed by any second approximation— its influence on the average «social» cost of production of goods and on the properties of the product.

The example of commuting is enough to tell us that a situation where people live in different localities to where they work can affect both workers in terms of convenience and entrepreneurs as a consequence of employing workers of different origin

—possibly varying in ethnicity. Well, all this can be integrated into the mainstream economic approach.

What is the *punctum dolens* (sore point) of the dominant argument? It is that a factory that has all its workers located within the walls of the town is not seen as something «essentially different» from one that also attracts workers residing at a distance. But in fact there is a difference, because we must take into account not just transportation costs or time required by commuting, but also the effect of cultural belonging to local societies who have a past more or less congruent with the type of performance required. We can ask what would have happened to Prato if instead of immigration coming from the close countryside, the development had started with migration from Southern Italy? Not to say if it had started with Afro-Asiatic migration! What would have been the implication for the development of Prato's textile industry?

For me, the logical approach is to classify working people and their families according to criteria rooted in a historical and socio-anthropological analysis of the productive nucleus and the changes it goes through. This approach clearly works for a substantially homogeneous productive nucleus such as in the processing of marble or wood in an area where the raw material is found (e.g. the manufacture of furniture made of chestnut in an area where chestnut trees grow); but the concept also has a more general validity.

10. The importance of places

So what? So there are places —that is, settled human groups— which have demonstrated a «productive talent», that has matured over the centuries, and this talent has moulded the territory and the *forma mentis* (mindset) of the population (the two main «fund factors» of the Roegenian analysis fund-flow: Georgescu-Roegen, 1971, pp. 211-275), and these places are able to find consumers for their products; while there are other places which are still looking for consumption needs towards the fulfilment of which their production can be advantageously orientated.

A sort of general equilibrium would exist in a situation where each place produces the things for the production of which it is better equipped (culturally and naturalistically). The equilibrium would reflect not so much an optimum allocation of «factors of private profit», but, rather, a best way to allocate factors (natural and historical) for satisfaction of human needs —including work—, considering humans as consumers and producers at the same time.

The key distinction in a market economy is between factors of human welfare and factors of profit. Only when the rates of substitution in the use of all traded goods equals the terms of trade between the goods can we say that the system, rather the «system of systems», is in general equilibrium.

Everything falls into place logically if we reverse the order of discourse. The production process does not consist, normally, of the direct and explicit application of techniques already known, but of a mixture of applications and adjustments to cir-

cumstances external to the production process itself at a given place and time in history. Around the technique in use there is like an atmosphere of innovative efforts that make up a reservoir of «minor innovations» —sometimes resulting in «major innovations»— that explain much of the increase in productivity. The minor innovations before being received into the productive practice —so to speak officially— increase the practical know-how of those on the ground. Such know-how is transmitted primarily by proximity, through direct observation and/or informal learning (yesterday «the workshop», today the apprenticeship).

It is precisely that atmosphere of non (or not-yet) codified productive knowledge that explains much of the ROE (returns on equities) and the ROI (returns on investment) that Signorini found to be particularly high for the firms in industrial districts. As long as this knowledge provides a differential advantage, industrial districts have a chance of development. What they have most to fear is, paradoxically, the involvement of technologists and «organizationists», who by codifying the atmosphere of technical knowledge that envelops their production processes nullify their advantage over large-sized firms.

In fact, knowledge components that can be formalized and those destined to remain in the form of know-how, grow at different rates, thus leading to changes in the relative importance of both of them.

If what has been said so far is correct, it follows that classification should break away from referring to sector in terms of proven and codified technology, and approach a formulation of the productive process that assigns an appropriate value to the processes of trial and error and to learning by proximity and direct observation. Of course, the significance of «informal» learning will differ for different processes: almost non-existent for the assembly line; fundamental for productions in which contributions «on the job» are relevant.

11. The matrix places-sectors

Some years ago I had come to conclusions similar to those of the group of researchers of the Bank of Italy (Becattini, 2001). Later, I included the topic in my collection of writings entitled *Ritorno al Territorio* (Return to the Territory, pp. 277-278) (Becattini, 2009). I sketched, in fact —in truth it was a bit adventurous— the idea of a matrix of places-sectors, where for each place is specified the presence of each production sector. And, vice versa, for each sector the places where it flourishes are indicated.

Included in my matrix were places that specialized in only one sector. In these places —to the extent that such places do exist— it is the sale of products from the one sector which provides their citizens with the purchasing power to buy from elsewhere all other commodities necessary for their existence.

Most of the sectors will, of course, be present in more than one place, just as most of the places will have the presence of more than one sector. A non-specialized place will appear in the matrix as possessing a long list of sectors, while an industry linked to certain specific characteristics of the territory (be they natural or historical) will only appear in certain places.

Such a matrix of places-sectors would show: *a)* the sectorialisation of any given productive place and/or the territorialisation of each given production apparatus; that is, in terms of the researchers of the Bank of Italy, the degree of «geo-sectoriality» of any given place or productive sector; in my terms, the degree of «productive chorality»; *b)* in the usual terms of the industrial economy, the roots and/or territorial distribution of a given productive sector. Such analysis would enable, ultimately, the design of an industrial policy that takes into account, *ab initio* and as a whole, the characteristics that are structurally favourable to the settlement of a given activity in a given place, one where this activity is not currently located. Such an objective is similar to those carrying out input-output analysis, but in our case with more general scope and more anchored to the territory. So, for example, in the case of wine production, analysis using our approach does not result in a picture of an aseptic viticulture, placed here or there, but entails recognition of places having their own special flavours, maybe using particular bottle shapes, both developed patiently over the centuries, reflecting the influence of generations of vine-lovers, along with the cultural traits of the «territory».

If you let your imagination run wild—which can be a good way of proceeding if you do not believe in it too much—can you think of a matrix of places-sectors that would allow you to describe the industrial development of a country along a thousand possible paths from any given state of development of the productive apparatus? Fantasy? Perhaps, but what is certain is that we really need a general productive phenomenological framework that captures two aspects together—physical and psychological proximity—if we want our studies to be truly at the service of man.

Hence my proposal of an alternative framing of productive phenomena to that of geo-sectoriality—releasing it from the pure and simple but mystifying concept of «productive sector»—namely «productive chorality», a concept which has its roots not in the economic history of the places but, rather, in their history *tout court*. We could perhaps say that we are talking about history of productive culture in an anthropological and/or sociological sense, perhaps even more than in a purely economic one.

In other words, we conceive of a development over time of «places of production»—that is, concretely, of all places—that witness the emergence of now one sector, then another; now the predominance of codified knowledge, now the flowing, elusive, pervasive influence of know-how.

12. Some final remarks

In short, the philosophically correct basis for analysing productive phenomena would be a dialectical-evolutionary vision of the totality of economic phenomena. In this perspective, instead of talking about localized sectoral specialization, or sectorialized local specialization, we should speak rather of a composite process where, in the service of human growth, act either simultaneously, or alternately, forces that come both from co-existence and co-production: external economies of «proximity of character» and external economies of «technical-productive proximity», all aimed at better satisfying a particular nucleus of needs.

This is my answer to the interesting proposal of the researchers of the Bank of Italy: —a reading of the data of production through the filter of geo-sectoriality. Such a reading— I repeat, and conclude —goes, in my view, in the right direction, but is perhaps timid and incomplete.

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