

Local Development, Proximities and Productive Encounters: The Case of Development Dynamics in the Region of Toulouse*

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Introduction: Productive Encounters between Firms and Territories

The present contribution proposes a synthesis of various reflections that have been developed over the past fifteen years or so about the notion of “proximity” (Bellet et al 1993; Torre and Gilly 2000). More precisely, our aim is to explain or clarify our suggested distinction between resources and assets on the one hand, and between generic and specific factors on the other hand (Colletis and Pecqueur 1993, 2005). This synthesis has led us to single out three modes of local development which we correlate with the strategies implemented by firms (Colletis and Rychen 2004). This then enables us to identify different configurations corresponding to various possible forms of “productive encounters” between firms and territories. In the second part, we show how this conceptual framework enables us to better understand the development dynamics at work in the region of Toulouse.

More explicitly, the first part of the present contribution provides the

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conceptual components of our reflection and is structured around four main points. The first point underlines the necessity of proposing a “dynamic” definition of what a territory is. The second point suggests characterising a territory as an “active” combination of different dimensions of proximity. This analysis then leads us to put forward three modes of territorial development – agglomeration, specialisation, specification – and to attempt a configuration of diverse possible forms of firm/territory “productive encounters”. The first part ends with an overall presentation of the relations between the different dimensions of proximity, the different modes of territorial development and firms’ strategies in the context of globalisation.

The second part of the contribution puts the concepts advanced in the first part to the test in an empirical case, that of the territory of Toulouse.

First, we set out to show that the three identified modes of local development coexist in the territory of Toulouse. We illustrate this proposition through the presentation of two new institutional devices, i.e. “competitive clusters” and the setting up of a “research institute on economic mutations” focusing on support to “structuring firms”.

The Conceptual Elements of a Dynamic Approach to Territory

The conceptual elements of the approach to territory proposed here have in common the fact that they are all part of a dynamic perspective and that they refute the possibility of interpreting territory as a mere resource holder. In our approach, the territory is “revealed” as the result of localised situations of coordination.

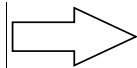
Towards a Dynamic Definition of Territory

Most of the definitions and notions used to qualify territory *postulate* it. The territory is set out as *existing as such*. It is *presented as being endowed with resources*, just like a stock. Our view is that a territory does not exist as such, but is “*revealed*” according to two processes: *i*) an “*activation*” process (latent or potential resources are converted into assets), and *ii*) if the need arises, a “*specification*” process (generic resources or assets becoming specific).

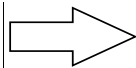
These two processes thus bring into play what has previously been designated (Colletis and Pecqueur 1993, 2005) as “factors of spatial competition” on the basis of a double distinction: *i*) between resources and assets on the one hand, and *ii*) between generic and specific factors (resources or assets) on the other hand. By “assets” we mean active factors, while the term “resources” refers to factors to be exploited, organised or even revealed. Generic resources or assets have a value independent of their participation in any production process. On the contrary, the value of specific assets is a use value. Specific resources only exist potentially; they arise from interactions and constitute the expression of the cognitive process which begins when stakeholders endowed with different skills produce new

TABLE 1 The Factors of Spatial Competition & their Main Characteristics

	Generic resources	Generic assets	Specific assets	Specific resources
State & transferability	Latent potential	Active, totally transferable	Active, irrecoverable transfer costs	Potentiality
Nature of the “revelation” or of the change of state	Exploration	Cost calculation	Dedicated asset, invested in a particular context (problem solving)	Deactivation & redeployability
Relationship to the market & nature of the value	Likely to be introduced into the market	On the market & exchange value	Quasi-market & use value	Likely to be invested with a view to solving as yet unidentified problems
Illustrative types	Raw materials, unemployed unskilled workers, hoarded savings	Active unskilled workers, liquid savings	Active workers in the process of acquiring qualification, invested savings	Skilled workers or uninvested/inactive specific knowledge



Activation



Specification

knowledge by pooling their competencies in order to solve an unprecedented problem. The fact of combining heterogeneous knowledge and learning gives rise to new knowledge, which itself may contribute to the emergence of new configurations (Table 1).

These two processes – activation and specification – may commence on the occasion of different situations of coordination between stakeholders, from the one-of resolution of an unprecedented problem to the implementation of a local development project (see further below).

The condition and the result of these processes are the construction of a *territorial cognitive patrimony*. We define patrimony here as being composed of the memory of past successful situations of coordination, of the trust that has developed on that basis, as well as of potentially complementary specific cognitive resources (which are likely to be combined with a view to solving future productive problems) (Colletis and Pecqueur 2005).

A Territory is the Active Combination of Three Dimensions of Proximity

Three dimensions of proximity lead to the qualification of a territory (Bellet et al 1993):

- A *spatial* or *geographic* dimension;
- An *organisational* dimension based on the potential complementarity of resources or assets;
- An *institutional* dimension relating both to the cognitive patrimony and the sharing of norms and values.

To be combined and to reveal a territory as a situation of coordination in space, the above three dimensions of proximity must converge by way of a “triggering factor”, which can create an unprecedented problem (Colletis and Pecqueur 1993), a development project, or even some other intermediate situation.

To begin with, we intend to discuss the three dimensions of proximity by focusing our reflection on geographic proximity. We then proceed to specify the notion of “triggering factor” (territory revelation).

First, the spatial or geographic dimension is not essential for situations of coordination to happen (Boshma 2005). Always situated in time, these require an organisational and institutional proximity, together with a triggering factor. Second, they are always situated in space as well in that the stakeholders are, from necessity, located somewhere. Obviously, spatial or geographic proximity is not always required or does not constitute a particular economic advantage.

Nevertheless, we admit – though the two analyses cannot be confused – that there cannot be any territory as we understand it here (which is not to be confused with the firm’s territory) without spatial proximity.

Torre and Caron (2005) underline the negative or restrictive effects which spatial proximity may have. These effects may be considered from the point of view of territory use conflicts, but they may also be understood either in terms of *i)* “institutional distance”, or in terms of *ii)* confinement to a “path-dependent” logic. The first case refers to situations where past coordination experiences, far from producing positive effects, have, on the contrary, given rise to antagonisms and conflicts. As a result, the stakeholders avoid or prevent all subsequent cooperation, preferring any solution to one that is territorial. The potential which organisational proximity constitutes is therefore not exploited.

In the second case, the territorial dynamics may be looked upon as a trajectory whose continuance is no longer in line with the evolution of the modes of production and/or of consumption. This case is frequently connected with the final part of a mode of development based on specialisation in a specific business line (sector).

Finally, we refer to a third case here: that relating to the weakening of institutional proximity. This case seems to us a little different from the two other ones in that it does not imply any conflict or antagonism, or any confinement to a path-dependent logic. The relevant stakeholders continue to want to cooperate

without locking themselves into a sectoral logic. They base their cooperation on competencies pertaining to different fields. However, the redeployable character of the resources which they mobilise is determined by their institutional proximity rather than by the nature (supposed intrinsic) of the resources so harnessed and yet, this proximity is never acquired permanently (Amin and Thrift 1993). Indeed, although there may not necessarily be any conflict involved, the stakeholders may sometimes see their relations slacken, especially on account of differences in terms of objectives and on account of temporality in terms of their actions. We should point out more particularly here that the stakeholders in question never appear totally within a single territory. They always cooperate with other stakeholders located elsewhere and everywhere (this supports the above argument according to which the spatial dimension of coordination is not always required).

The convergence of the three dimensions of proximity – geographic, organisational and institutional – is not spontaneous at all. It is a potential convergence. The stakeholders are close to each other in space. They have potentially complementary resources at their disposal. They share the same values. They therefore know and “recognise” each other.

An effective coordination of these stakeholders presupposes a triggering factor, which may be the needs of a stakeholder when confronted with a “problem”. Thus, any firm which is not in a position to overcome a problem through its own competencies may look for spatially close complementary competencies with a view to solving the issue at hand (Colletis and Pecqueur 1993). It will do so all the more easily because it knows other stakeholders who are nearby spatially and who it may assume to have the competencies it needs and with whom it has established a relation of trust as a result of past successful situations of coordination.

The above triggering factor is of a one-of nature in time. It enables the “revelation” of the territory on the basis of an effective coordination. Once the object of this coordination has been achieved (the problem has been solved), the territory does not consequently disappear as its cognitive patrimony has thereby been strengthened. The next time the stakeholders are confronted with other “problems”, they will be able to use their memory of this situation of coordination and cooperate again.

However, we may also envisage many other examples of triggering factors situated over longer time horizons. A local development project is a typical example of configuration over a long time horizon. In this case, the parties involved in the territory pool complementary resources (organisational proximity), which they dedicate to ensure the implementation of the project. What unites these stakeholders is the project’s temporal horizon. All the actions undertaken must, indeed, converge towards the scheduled completion date.

TABLE 2 The Three Modes of Local/Territorial Development according to the Intensity of Mobilisation of the Different Dimensions of Proximity

	Spatial proximity	Organisational Proximity	Institutional proximity
Agglomeration	XXX	(potential resource)	X
Specialisation	X	XXX	XX
Specification	X	XX	XXX

The Three Modes of Territorial Development and Firm/Territory “Productive Encounters”

Three modes of territorial development, which are not mutually incompatible, are identifiable. Each of these three modes relates to a particular combination of the three dimensions of proximity, with a special emphasis on one of these three dimensions (Table 2):

- *Agglomeration*: this mode focuses on spatial proximity and the advantages it brings (external agglomeration economies);
- *Specialisation*: this mode of territorial development concentrates the trajectories within a given branch of industry and is based on an organisational proximity which strongly influences the nature of institutional proximity;
- *Specification*: this mode of territorial development is characterised by the redeployability of competencies, avoiding the organisational and institutional “lock-in” effects of specialisation trajectories. The main feature of this mode is institutional proximity, which makes the redeployability of competencies possible. The redeployability of competencies is thus first a matter of networking before being linked to the specific characteristics of the competencies themselves.

Productive Encounters between Firms and Territories

Firms are characterised by a very great diversity of strategies which we do not intend to develop in this paper.

Rather, we focus our attention on the dimensions of these strategies which have an impact on possible productive encounters with one or other territorial dynamics as we understand it here, i.e. configured by the different modes of local development (Colletis and Rychen 2004).

We identify three dimensions which enable the qualification of the firms’ strategies:

- The first dimension clarifies the generic notion of “firm”: we distinguish three scenarios, i.e. that of the group, that of the company (whether a subsidiary or

independent company), and that of the establishment (factory, marketing unit, logistics node);

- The second dimension – whether the company belongs to a group or not – designates two types of “agreement”: *i*) a possible group agreement, which governs the relations between the group and its subsidiaries (financial or productive relations, relations that give those in charge of subsidiaries a strong or weak decision-making autonomy), and *ii*) a business agreement, which describes the “style” of the professional practices in a given sector, business or “craft”;
- The third dimension concerns the type of strategy to be implemented: a strategy centred on cost control or a “global” strategy combining cost control with supply differentiation. The latter case gives rise to two different scenarios: *i*) that of companies whose business is strongly linked to a particular sector, and *ii*) that of companies oriented by cross-disciplinary technologies, which are likely to be developed in different sectors.

The combination of these three dimensions determines the nature of the possible relation, that is to say the type of “productive encounter” between the unit considered (a company most often) and the territory.

Furthermore, we would like to complete this analysis with the presentation of a particularly important phenomenon which qualifies a great number of present-day strategies and offers a “historic” opportunity for productive encounters. This phenomenon is that of outsourcing.

To reduce their costs and their risks or commitments and to refocus as well on their core competencies, today’s firms have moved towards outsourcing practices, thus turning their backs on integration strategies. These outsourcing practices may either concern functions or sub-functions of the company (such as logistics, recruitment, maintenance and communication), lines of business (such as the production of a good or service which had previously been carried out in-house), or competencies and/or expertise. The last scenario is the most interesting in that it reveals that today’s companies – even and above all the largest ones – can no longer claim that they have, in-house, all the necessary competencies they must combine at time “*t*” with a view to offering effective solutions to (new) customers whose needs are highly changeable and constantly being renewed.

In this context, companies must therefore identify the complementary competencies they need. They can certainly do so without taking possible territorial solutions into account, but the territory can actually constitute a space for potential solutions on the basis of its cognitive patrimony and the specific resources it may provide (see above). This patrimony and these resources sometimes have to be enhanced through a particular public policy. We mean to illustrate this case in the following part.

TABLE 3 Firm Strategies, Dimensions of Proximity & Modes of Territorial Development

	Spatial proximity as the main dimension of agglomeration dynamics (business heterogeneousness, generic factors)	Organisational proximity as the main dimension of specialisation dynamics (factors dedicated to a sector)	Institutional proximity as the main dimension of specification dynamics (specific factors)
Cost-oriented firms: search for the best location	Adequacy: optimal location	Search for the production of a non-cost advantage through product differentiation	Exploitation of a cost advantage with stakeholders mainly engaged in a cross-sectoral no-cost rationale
Firm specialised in a given sector: territorial rooting according to a “professional” logic	Search for cost control (global competitiveness)	Adequacy: ‘territorialisation’ through the exploitation of complementary resources within a given sector	Search for the production of a non-cost advantage through diversification
Cross-sectoral firm: territorial rooting according to a ‘redeployability of competencies’ logic	Search for cost control and exploration of heterogeneousness as a source of potential complementarities	Exploration of sectoral solutions questioning the sector’s boundary	Adequacy: ‘territorialisation’ through the mobilisation of competencies which may be used to solve non-sector-specific “unprecedented” problems

Dimensions of Proximity, Modes of Territorial Development and Firm Strategies

From the above analysis it is possible to propose a formulation in tabular form (Table 3), which synthesises in a typological way the variety of the relations between firms and territories.

We may deduce the following observations from this table:

- There actually are situations of “adequacy” between certain strategies on the one hand, and a particular territorial development configuration on the other (see diagonal line in chart above). In other words, there are situations of correspondence between certain firms’ siting strategies and what the territorial dynamics may offer them;
- Apart from these cases of (“perfect”) correspondence or adequacy, there are also other configurations which may allow the firm/territory relation to present an economic interest for the firms. By way of illustration, cost-oriented firms may attempt to extend a location advantage by moving towards a strategy of differentiation, or even of diversification. To do so, they look for spatially close complementary competencies that are likely to help them

escape a cost-centred logic. We should point out here that a more precise approach to understanding these complementarities must *i)* take into account the type of elementary unit which the term “firm” encompasses (independent company, subsidiary of a group to which it is bound through a particular industrial or financial agreement giving it a more or less important decision-making autonomy), as well as *ii)* consider the business agreement which describes the prevailing professional practices in the sector concerned;

- Considering the territorial dynamics as our starting point might lead us to think that there is a kind of hierarchy moving from agglomeration to specialisation to specification. This hierarchy could *a priori* be admitted if we remain within a perspective of territory viability. However, as mentioned above, specification is also that part of territorial dynamics which is most dependent on the quality of institutional proximity. Yet, it is to be noted that institutional proximity is fragile and never acquired. We could give numerous examples of territories which used to be characterised by a strong institutional proximity and now find themselves in difficulty because of a weakening of this proximity as a result of the erosion of local arrangements or as a result of compromises over time.

The Territory of Toulouse as a Territory where All Three Modes of Development Coexist

In this part, the intention is show that the three previously described modes of local development may all be observed simultaneously in the dynamics of Toulouse. It is then proposed to examine the experiment initiated by the Regional Council which consists of setting up a research centre on economic mutations from a basis which may indeed appear as being original.

Agglomeration, Specialisation and Specification

Toulouse’s employment zone represents about 40 % of the jobs in and 50 % of the total wage-bill of the Midi-Pyrénées, the region in France with the largest surface area. Due to its size, this zone offers the greatest possibility for business diversification in the region and therefore presents the lowest Gini coefficient,¹ i.e. about 30% in the early 2000s. This does not prevent the Toulouse zone from asserting its industrial “calling” in some sectors, such as aeronautics and the space industry.

If we focus on Table 3 that was used to differentiate three modes of local

1. The Gini coefficient of concentration is calculated on the basis of the wage-bills located per establishment. This base is preferable to that of the salaried workforce in that it better takes into account the qualification of employment. The Gini coefficient is calculated by the INSEE Midi-Pyrénées. See INSEE, Midi-Pyrénées (2005).

development, the following observations may be made for each of the three modes:

- *Agglomeration*: the territory of Toulouse attracts companies in all branches of industry owing to generic advantages such as infrastructure, the supply of real-estate (business parks in particular) and certain subsidy equivalents (allowances, tax or social exemptions);
- *Specialisation*: Toulouse has specialised in aeronautics and the space industry by developing lines of business around these two industries. This development relies on the companies operating in these sectors as well as on the research and training institutions, thus backing up a specialisation trajectory first based on an organisational proximity;
- *Specification*: in the region of Toulouse, there are skills and competencies which may be redeployed outside aeronautics and the space industry. Such is the case of “airborne systems” for instance. This business (which is not a sector) combines competencies pertaining to different areas. Moreover, airborne systems may be found in a great variety of products and markets.

We would like to bring up two points at this stage of the analysis. As already underlined, our view is that the redeployability of competencies depends mainly on network effects that are highly correlated with institutional proximity and the existence of a territorial cognitive patrimony. Furthermore, these network effects, to create or strengthen the specification dynamics, require, in all likelihood, a minimum potential territory size. Below a certain threshold territory size, it is probable that only agglomeration or specialisation dynamics will develop. On these grounds, metropolises do constitute a potential space for the development of specification dynamics, whereas “labour market areas” are more likely to expand on the basis of agglomeration and/or specialisation dynamics.

A New Institutional Device: Competitive Clusters

The combination between the three above-mentioned modes of development enables us to avoid the “specialisation *versus* diversification” dilemma by potentially fulfilling one of the goals of the “Regional Economic Development Plan” (SRDE), which was adopted by the Midi-Pyrénées Region in 2006 and can be summed up as follows: “The redeployment of industrial competencies – especially those acquired through aeronautics and the space industry – within other industrial sectors, is a major issue for the regional production apparatus” (SRDE 2006).

From this perspective, it is interesting to observe that Toulouse’s main competitive cluster – which pertains to aeronautics and the space industry – is

designated as the “Aeronautics, Space & Embarked Systems” cluster.² According to our above interpretation chart, this case is actually an illustration of a mode of development based on specialisation/specification coupling.

If, indeed, aeronautics and the space industry may be regarded as “sectors”, such is not the case for embarked systems, which can be redeployed in different sectors other than aeronautics and the space industry (for instance, such as in the car, rail and shipping industries).

Moreover, we should point out as well that the second competitive cluster of Toulouse is the “Cancer-Bio-Health” cluster which, as its name indicates, borrows different competencies from various fields and is, by nature, non-sectoral.

Therefore, the three above modes of local development coexist in the Toulouse area, which is probably the case in a number of international metropolises. This fact presents a major advantage in that it can lessen the difficulties in connection with the present situation involving Airbus and, in the longer term, it will also enable this zone to avoid locking itself into a specialisation trajectory.

The Setting up of a Regional Economic Observatory Dedicated to Economic Mutations

Within the framework of its “Regional Economic Development Plan”, the Midi-Pyrénées Region undertook to set up an Observatory dedicated to economic mutations. This Observatory is original in that it suggests neither a monitoring of the various sectors identified according to the usual nomenclatures, nor a survey focused exclusively on the region’s main companies.

The perspective adopted consists in spotting firms that are “structuring” for the regional industrial system. These firms are designated as structuring insofar as they come under one of the following three categories:

- The first category is made up of firms whose purchases for a specific territory are particularly significant (economic weight);
- The second category consists of firms which occupy a particular place in an industry’s value chain. Special emphasis is placed on the so-called “pivot” firms which are both capable of producing complete systems and acting as a bridge between the prime contractors and subcontractors;
- The third category consists of firms which have an emblematic behaviour in terms of innovation. Innovation is viewed here in the general sense: product or service innovation, but also process innovation and organisational innovation.

2. Competitive clusters constitute spatial concentrations of generally high-technology businesses. These clusters are approved by the French State and, on that basis, are given government funding within the framework of requests for proposals.

This typology of firms that are “structuring” for the territory of Toulouse correlates with the three previously-expounded dimensions of proximity, as well as with the various modes of local development.

The first category of firms whose purchases (inputs, equipment purchases, service acquisition) are significant may be established in the Toulouse region for different motives: cost control to the search for needed competencies. They are structuring for the territory of Toulouse on account of the spill-over impact their high purchase volume generates. These firms may strengthen the agglomeration dynamics by giving rise to or by confirming threshold effects regarding certain facilities (such as roads, communication networks and energy) which would not be established if they were not located here, but elsewhere.

The second category of firms (like the third one) comes within the specialisation/specification coupling. Pivot firms (see above) are particularly important for the future of aeronautics, but also for the development of airborne systems. As we know, Airbus must increase the share of its turnover derived from outsourcing, as well as reduce the number of firms with which it cooperates. This double objective involves a growing recourse to intermediary firms which are able to provide Airbus with complete systems (e.g. landing gears, engines) and thus act as a bridge between the aircraft manufacturer and the thousands of components manufacturers and subcontractors which they themselves organise. The strategy of pivot firms, their territorial rooting and, conversely, the lines of business they may decide to relocate, all have a decisive impact on the future of the territorial dynamics. Instead of trying to impact directly on Airbus, local public policies should more assuredly and more effectively impact on these pivot firms by developing a supply of generic factors and, above all, by helping them identify and mobilise the local competencies they need. Furthermore, these pivot firms may also contribute to the redeployability of competencies outside aeronautics, as although the systems they design are dedicated most often to that specific industry, they, unlike Airbus, also mobilise the competencies of companies that are in a position to work for very different sectors. It is precisely these competencies which are currently organised around the “airborne systems” business line.

Let us finally come to the last and third category of structuring firms, i.e. emblematic innovative firms. If these are rarely associated with an agglomeration logic, they however play a major role in the viability of specialisation trajectories. By way of illustration, they have, in other territories (the Rhône-Alpes Region, for example), allowed certain unfavourable specialisations to evolve, such as in the textile industry which they have oriented towards “technical” uses (e.g. special textiles used in structure roofing, the space industry, health sector and competitive sport).

Most often, however, the innovations developed by these firms lead them outside the usual boundaries of the sectors from which they originally stem. They thus take an active part in the development of specification dynamics. Here we follow the approach developed by a number of authors (Grossetti et al 2006; Zuliani 2008) regarding “local systems of competencies”. In the systems described by these authors, the associated competencies derive from several sectors and trade types, hence enabling producers to remain free from dependence on a single sector when creating different products.

Ultimately we may therefore conclude that, whether in the case of competitive

clusters or in the setting up of a regional research centre on economic mutations, institutional dynamics and the creation of specific cognitive resources are inseparable (Colletis and Pecqueur 1995).

Conclusion: The Usefulness of Enriching the Reflection on the Various Dimensions of Proximity for the Purposes of the Analysis

The reflection of the researchers who retain the concept of proximity has given rise to various types of divisions which it would not be pertinent to mention here in detail (Pecqueur and Zimmermann 2004). One of these consists in wondering whether or not the three dimensions we use in this contribution are necessary and are, above all, sufficient in explaining, not territorial dynamics as a whole and in all its varieties, but innovation dynamics or even dynamics of inter-firm technological co-operations or alliances, so long as these are also understood in terms of their situation in space.

Our view is that the three above-mentioned dimensions of proximity should be enriched with other dimensions when it comes to conducting the analysis, not from the perspective of territorial dynamics, but dynamics of another kind (innovation, technological change), whose situation in space is still worth considering.

Furthermore, it could be interesting to examine the notion of “cognitive” proximity as well; this attempts to grasp similarities between firms sharing the same competencies (Nooteboon 2000; Bouba-Olga and Grossetti 2006), and is not to be confused with the notion of organisational proximity.

Moreover, the notion of “relational” proximity (Vicente 2003; Grossetti and Filippi 2004), which describes interactions – possibly one-off – between stakeholders, is not to be confused with that of “institutional” proximity.

These two dimensions of proximity – cognitive and relational – as well as their correlation (Brossard and Vicente 2007) are therefore fruitful, and their combination is likely to produce particularly interesting analytical results. They do not add to or even compete with the three dimensions for which we opted in this contribution. They indeed throw considerable light on dynamics other than territorial ones.

Therefore, to ensure that we have rigorous tools and concepts at our disposal, we should be careful to specify clearly the set of dynamics on which the analysis is expected to shed light on. This does not mean, however, that we should not correlate the chosen tools so long as the dynamics we propose to analyse are themselves interconnected. There is, indeed, no reason to set territorial dynamics in opposition to innovation dynamics (Massard et al 2004), even if the latter are not always dependent on the former.

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