Thematic Article

Learning regions for local innovation

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Abstract

This chapter looks at the role that educational bodies can play in promoting social and economic innovation at a local or regional level. A locality or region promoting innovation can be called a 'learning region'. The chapter demonstrates how learning in a 'learning region' differs from traditional formal and individualistic learning.

Keywords: learning region, innovation, collective learning, innovative communities, dialogue, partnership

1. Introduction

Following this brief introduction, sections two and three of this chapter discuss the meaning of the 'learning region' concept and take a look at the circumstances that stimulated education and training (E & T) agencies ([1]) to take up the concept. Section four of this chapter outlines the different ways in which education and training authorities engaged with the learning region concept in practice. An analysis of the different practices, presented by means of a typology, shows the variety of learning region models. A brief section five presents concluding remarks.

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2. The learning region - a collaborative approach to regional innovation

One of the earliest references to the concept of the learning region related to the role of education and training (E&T) and more particularly, vocational education and training, occurred in 1994 during a series of European exchange seminars (supported by the EU Eurotecnet programme), focusing on the role of education in the reconstruction of the former east German states (Länder) (see Koch, 1994). These states faced a range of complex and interrelated economic and social issues that required education and training to work in close partnership with all the different economic and social actors.

The emerging 'learning region' concept developed by economic and social thinkers (see Asheim, 1996; Brusco, 1986; also see Florida, 1995; Lundvall & Johansson, 1994; Lundvall & Borras, 1997; Putnam, 1993a, 1993b) was put forward as a way of envisaging how all actors sharing the same local context could learn to cooperate with each other in addressing economic and social innovation. The learning region concept according to the above authors entailed the establishment of locally driven bottom-up networks involving public and private economic employment and financing actors, R & D centres, social partners, universities and other educational and training institutes. In other words, the local community learns together in an integrated way with all parts of the socio-economic 'system' moving forward together. Thus, the interfaces between the different parts of the system are critical focal points for dialogue and cooperation enabling people to learn together and from each other ([2]).

([1]) The term E&T agencies refers to all education and training bodies including universities and research institutes.

([2]) For an account of initiatives in line with the learning region concept in the former east Germany see Treptow at al., 1999; Kidder & Attwell, 2000.

During the above mentioned exchange seminars in the former east German states, the education and training actors were challenged to take on a key role in mediating dialogue between actors across boundaries. Of course, at that time the education and training system in east Germany was still in the process of attempting to move away from a bureaucratic approach to knowledge development and teaching and learning, so the learning region concept was an enormous challenge to them. However, it was recognised that education and training institutes had advantages in the moderation of learning region networks, in that they could draw on research and training resources to promote economic and social reform activities. They could also claim a legitimate public role to engage with all actors in society.

While the Länder of the former east Germany form a unique case, all countries and regions in Europe have had to restructure themselves over the recent years as they moved from a more stable economy and labour market to one based on world-wide competition calling for continuous innovation. In this regard, the regional or local focus was seen by different commentators to provide an appropriate context in which to devise innovative ideas and put them into practice (see Lundvall, 1992). Ennals and Gustavsen (1998) argue that regional networks, based on 'development coalitions' open up possibilities for the widespread adoption of innovative forms of work organisation. (Also see a later work by Fricke & Totterdill, 2004.)

2.1 Innovation as a community-based 'collective learning' process

Many people see 'innovation' and 'learning' as separate spheres of human activity. Learning is seen to be the transmission of knowledge based on, and following on from, an innovation breakthrough. However, Brown and Duguid (1991) disagree with the above, contending that 'working', 'learning' and 'innovating' are just different dimensions of the same reality. Innovation is fostered through people with different specialisms learning together. All life and work problems have multi-faceted and related aspects that can only be addressed by collective work and learning: practitioners working together with, for example, technological specialists and researchers. Innovation is a complex multi-faceted socio-technical process that is fostered by collaborative learning networks – webs of interactions – on how to improve practice. An education and training agency can act as 'the spider' in a learning-network web (see Deitmer & Attwell, 1999).

3. What is meant by a 'learning region'

The concept of the 'learning region' has been briefly outlined, but now it needs to be fleshed out somewhat more. In this section the meaning of the term 'learning' in the learning region concept and the meaning in the term 'region' are discussed. The benefits resulting from a learning region, which can be termed 'social capital', are also discussed.

What precisely is meant by the learning region? It is a rather elusive term with lots of different meanings. As we shall see later on there are many different understandings and definitions of learning regions.

3.1. The meaning of the term 'learning' in the learning region

First of all what is meant by 'learning', a rather ambiguous word when applied to a region? Normally, learning is associated with schooling and formal education and training. In contrast, the term learning region has been coined not by educational theorists but economic geographers, social economists and learning theorists from an ethnographic background. So learning in the learning region sense is mainly about what is often called 'informal learning': the kind of learning that people engage in as part of their everyday life. Humans are 'learning beings'; learning is a way of being human. In fact 'informal learning' is 'natural' learning and calling it informal learning tends to give it a kind of second class status. Etienne Wenger (1998) writes about this kind of learning: 'Being alive as human beings means that we are constantly engaged in the pursuit of enterprises of all kinds, from ensuring our physical survival to seeking our most lofty pleasures. As we define these enterprises and engage in their pursuits together, we interact with each other and with the world, and we tune our relations with each other and with the world accordingly. In other words we learn'. (This text is quoted in Stamps, 2000, p. 58)

In fact, most learning is of this kind (see Cedefop's publication on citizens' views, 2003). According to this survey people consider that they mostly learn in informal everyday settings such as: 'getting together with other people'; 'learning through leisure activities'; and 'working/learning on the job'. A later survey (Chisholm et al., 2004) confirms this in showing that informal learning plays a major role in people's lives. Informal learning is more significant for our lives than formal learning because it directly shapes our practice. It has a direct impact on how we act. However, being informal learning does not mean it is easy. Much of it is difficult and even painful.

This kind of learning is not something we pursue on our own, but we mostly learn together with and from other people, engaging in common activities. This learning can therefore be called 'social' or 'collective' learning. Wenger goes on to say that 'overtime this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense therefore to call these kinds of communities "communities of practice"' (quoted in Stamps, 2000, p. 58).

Most learning occurs through the process of participating in and contributing to the life of a community. As it comes about through social interactions it cannot be seen as just the property of individuals; it is shared. It is greater than the sum total of the learning of

all individuals; it is collective. This is the meaning of the word 'learning' in the term 'learning region'.

Informal learning therefore is the 'normal' or 'natural' way that people learn. Formal learning in education institutions is a minority form of learning for the vast majority of the population who are not in formal education. But of course, formal education is a basis for 'natural' every day learning and there is much abstract and theoretical knowledge that can only be learnt in formal educational settings. However, its main purpose is to give people a foundation for a lifetime of 'natural learning'. One of the most important things that the formal educational and training system can give people is the competence to learn (Nyhan, 1991). It is important to understand the distinctive strengths of formal learning and 'natural' (informal) learning. In formal learning the focus is on the individual. Individuals are taught and tested for their individual knowledge and skills. The objective is to build up individual 'human capital'. In contrast the learning that takes place in the learning region is collective learning giving rise to 'social capital'. Each person owns a part of the knowledge learnt. So it is the community that owns the learning that takes place in the learning region.

Another difference between formal and 'natural' learning is that much of formal learning is abstract and theoretical whereas learning in the 'learning region' is practical and action- oriented aimed at the achievement of a common goal or common good. It is action based learning (see Engeström, 1987 on 'activity (learning) theory' and Revans (1982) on action based learning). The experiences of companies that have introduced new management and learning approaches along 'learning organisation' lines, throw light on how learning in the learning region takes place (Senge, 1990) and Morgan, 1997; see also Nyhan et al., 2003). This means the adoption of flatter organisational structures with autonomous work groups. Learning is embedded in this process, taking place in the problem-solving environment of the workplace. To assist this process the HRD or training department plays a catalyst role rather from a direct-training one, assisting different employees to pool their experiences to generate new knowledge in 'knowledge creating companies' (see Nonaka & Takeuchi, 1995).

But of course much of 'natural' learning may not be 'good learning': indeed it can be 'bad learning': acquiring 'bad habits'. This is why there is a need for training and development moderators to enable people reflect on what and how they are learning. The learning region concept, similar to the learning organisation concept, is about moderating the energy of everyday natural learning and when necessary transform 'bad learning' into 'good learning'.

3.2. The meaning of the term 'region' in the learning region – the importance of community, locality and place

It is now time to reflect on the meaning of the word 'region' in the learning region. Social and economic geographers have brought the local, contextual and culturally embedded community dimension of knowledge to our attention in contrast to other specialists who tend to focus on knowledge as something abstract, theoretical and context-free.

Despite the emphasis on globalisation and the prediction of the 'demise of place and distance', due to advances in information and communication technology, the locality is continuing to assert itself as a focal point for economic and social life ([3]).The EU policy to promote economic and social cohesion based on a regional approach has been very successful (see Nyhan, 2000). Due to their smaller scale, regions can better coordinate their planning efforts and be more flexible than larger national entities in coming up with solutions to address everyday problems. The possibility of close personal contacts along with the feeling of a communal identity and a shared history can generate commitment to work hard on a local level, building 'social capital' which is not always the case at a national level.

The word 'region' in the 'learning region' sense, therefore, is to be interpreted in a very broad way to refer to a geographical area or locality whose inhabitants share common objectives or problems. This does not have to be a statutory regional entity, nor does it necessarily have regulated or defined 'political' boundaries. The distinguishing feature of a learning region is not its statutory or non-statutory regional status but rather the existence of a 'networking' and 'horizontal' form of cooperation among people in the same territorial area who have a common interest in working together for a common goal or common good.

In very many cases 'learning regions' may refer to small scale communities, localities, towns or villages involved in collaborative learning activities, even across states or countries. The important feature is the collective efforts producing an outcome in the interest of all those living in close proximity with each other.

For the above reasons all learning regions are unique, based on their own particular characteristics, history, strengths and weaknesses. So for example, the difference between a north of Italy learning region (e.g. 'industrial districts' of Emiglia Romagna) and the region of Gnosjö in Sweden. Both of these based on local historical traditions, work ethic and shared values, are different from other Nordic learning regions based on regional innovation steered by public and private policy.

However, one should not exaggerate the advantages of regions in promoting economic and social advancement. Regions and localities often can be inward looking and resistant

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([3])Porter (1992) pointed out the distinctive value of local factors: in particular the clustering of enterprises in the same sector in a particular region.

to change. Power within regions can also be held by cliques who manipulate affairs for their own purposes and resist necessary national-level reforms. Also, some economically well-off regions can be isolationalist, thinking only of their own self-interest and not taking responsibility for broader national social and economic issues.
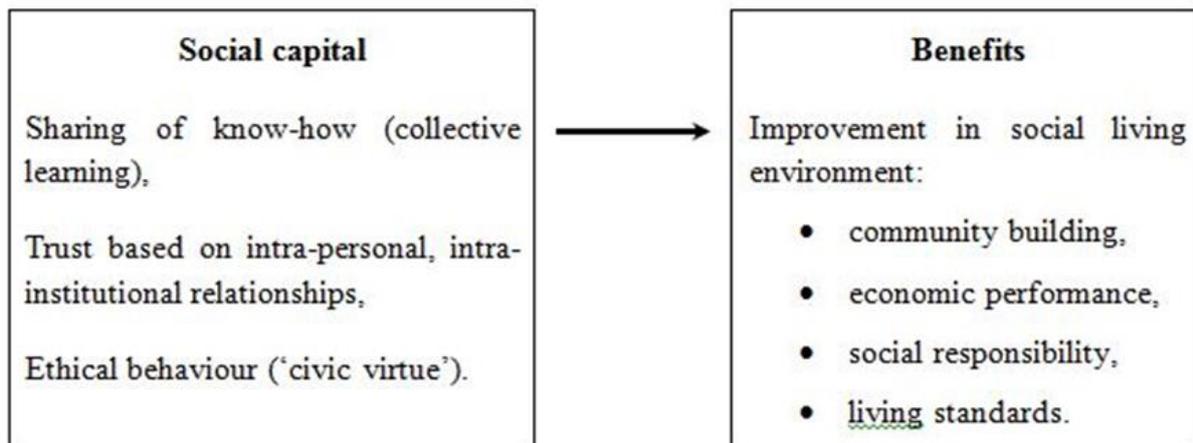
Even though the theory of 'social capital' had been around for a long time, Robert Putnam's study of the regions of northern Italy (1993a/b) made the concept known to a much wider audience ([4]). He made a direct link between the quality of the relations between people in a particular locality and their everyday economic and social life, their 'civic life' as he termed it, and the performance of its political institutions and economy. He argued that political institutions perform better when civic life is characterised by: 'civic community'; a strong associational life; civic engagement; political equality; solidarity, trust and tolerance. Communities with these features possess 'social capital'. According to Cooke (2000) and Wolfe (2001) the creation of social capital is one of the benefits of the learning region as outlined above (see also OECD, 2001a).

Putnam (2000) expanded on the idea of social capital in a later best selling book in which he argued that with the rise of individualism, social capital is declining in the US (His description of social capital in that book is as follows: 'Whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called "civic virtue". The difference is that "social capital" calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital' (2001, p. 19).

According to Lesser and Pusak (2000, p. 124) social capital refers to the social resources that individuals within a community create through their webs of social relations and then draw on as a common resource to improve their community's way of life with regard to its social living environment, economic performance and living standards. Building social capital is based on intangible and informal relationship and tacit understandings that cannot be measured in terms of classical quantitative criteria (see also Docherty et al., 2002).

([4]) See also Coleman, 1988 and 1990.

Figure 1: Benefits of social capital

Social capital	Benefits
Sharing of know-how (collective learning),	Improvement in social living environment:
Trust based on intra-personal, intra-institutional relationships,	• community building,
	• economic performance,
Ethical behaviour ('civic virtue').	• social responsibility,
	• living standards.

According to Fukyama (1995, p. 26) 'social capital is the capability that arises from the prevalence of trust in society. It differs from other forms of human capital in so far as it is usually created and transmitted through cultural mechanisms like religion, tradition or historical ties'. De la Fuente and Ciccone (2002) define social capital as 'the norms and social relations embedded in the social structure of a group of people that enables the group or individuals participating in it to achieve desired goals.

Social capital is dependent on 'mutual giving and receiving relationships' and cannot be generated on the basis of pure market relationships (MacIntyre, 1999). This community needs to be an 'ethical community of practice' (see Nyhan, 2006).

4. E&T and the learning region concept

This section discusses the take up by E&T actors of the ideas discussed above. In the first place as already alluded to, economic and employment crises forced the education world to radically examine its policies due to the fact that the classical linear supply of /knowledge was not operating smoothly.

Traditionally educational bodies have two objectives: teaching/handing on 'existing' knowledge and researching new knowledge. For the most part teaching, means the transmission of formal (abstract/theoretical) knowledge. Regarding research, the focus is mainly on developing new theoretical and scientific knowledge, at a remove from society, which is then passed on to 'users' as 'applied knowledge'. Both of these teaching and research approaches are based on a linear, top-down view of knowledge development and innovation.

But, many education and training policy makers and actors saw that they must change this linear approach and begin to interact more with economic and social actors if they are to successfully contribute to innovation in society. European Union policies and programmes stressed the concept of partnerships and in particular social partnerships as a key to the future: an interactive approach, engaging with all stakeholders in society.

Regional approaches along learning region lines are seen as an appropriate way to promote innovation on the ground.

A second factor contributing to the interest of E&T in the learning region concept is the new awareness of, or perhaps more accurately the 'rediscovery' that learning is fundamentally a social interactive process that takes place in activity systems (Engeström, 1987; see also Engeström et al., 1997). Gibbons et al., (1994) show that knowledge has multiple sources.

The desire to come up with a more relevant contribution to innovation gave rise to building links between universities and the external community. The involvement of universities in local or community economic and social affairs was referred to as the 'third role of universities' complementing their traditional roles of teaching and research. Many universities carry out this function through research and development partnerships with local industry, consultancy to SME networks or through participating in setting up science and technology or business parks often in close proximity to the university campus. Many countries establish regional colleges closely related to local business and industrial concerns.

The work of the OECD at the beginning of the century gave a stimulus to the development of the learning region concept. One only needs to cast a glance at the titles of OECD publications, such as: 'Learning how to innovate - the role of social capital' (2001a); 'Cities and regions in the new learning economy' (2001b); 'Economic and cultural transitions towards the learning city - the case of Jena' (1999); 'Regional competitiveness and skills' (1997); 'Learning how to innovate - knowledge regions' (2001c) to appreciate the level of interest in the learning region concept.

The EU structural fund programmes (regional and social funds also gave a major impetus to regional development programmes in which E&T activities played a key role. In all of these programmes there was emphasis on multi partnerships. The notion of local cooperation as a strategy for competitiveness, employment and social cohesion was outlined in many documents of the European Commission. Many reviews showed that local partnerships contributed to economic and social cohesion, to greater efficiency in the use of funds and a reduction in the democratic deficit.

Through the establishment of 'public-private partnerships', local development strategies were seen to mobilise new actors and provide new financial resources for development projects. These, entitled bottom-up initiatives involving all the economic, social and cultural actors; enterprises, trade unions and 'civil society' associations. Local development was also seen as a way to promote greater efficiency in the use of public finances through facilitating transparent and efficient self-management.

However, an analysis of these and other E&T sponsored projects using the term 'learning region' revealed different realities. The typology presented below suggests four types of 'learning regions'. See Figures 2 and 3 which depict the four types.

Type A is about cooperation between education and training (E&T) bodies in a regional context, for example establishing regional learning or educational and career guidance centres. Type B is concerned with cooperation between E&T and enterprises or other public bodies to deliver training on a regional / local basis. Both of these types follow a traditional linear and more formal approach to learning.

On the other hand, type C follows a more open approach to learning in that E&T bodies define a new role serving the community. This is a developmental approach and could entail, for example, adult education, community education, consultancy, research (the latter typically carried out in a special department of a university). Type D supports mutual interactive learning in which E&T bodies join with other bodies, for example economic and social actors and other (SMEs etc) bodies in addressing innovation at the local level. This is an integrated action-oriented view of regional learning.

Figure 2: Typology of learning region project s (1)

Source: Own construction

Most of the E&T projects came under types B and C. They were attempting to break out of their traditional ways of acting to meet the needs of their localities through devising innovative solution to address the following kinds of objectives: set-up competence councils and centres; improve quality of working life; improve ICT competences; address needs of older people; undertake adult education; promote cultural activities; assist disadvantaged people; promote e-learning and digital knowledge management; promote exchange of knowledge across the EU.

Figure 3: Typology of learning region projects (2)

= education body
= enterprise work organisations
= social organisation
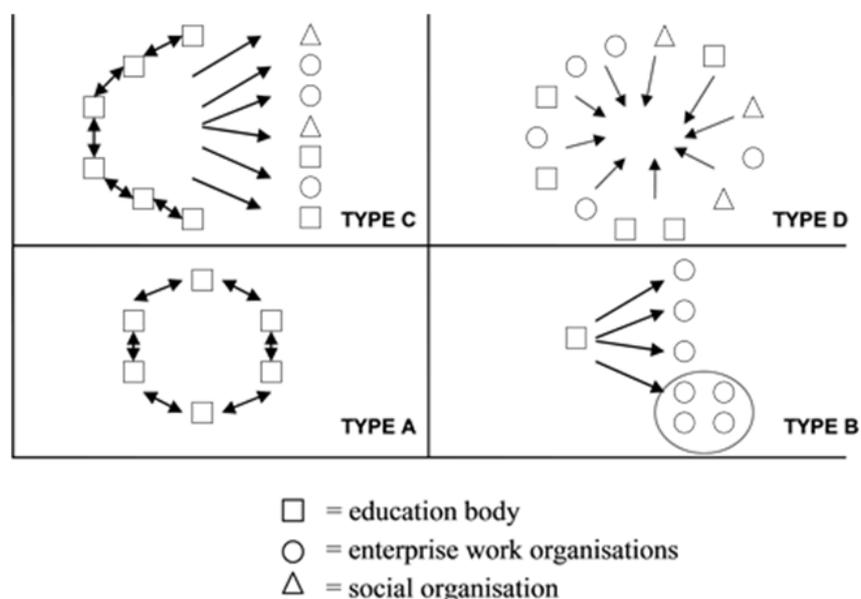
In general there were not too many E&T bodies that came to grips with the issue of joining partnerships along Type D lines. Those that were successfully engaging with a multiplicity of partners along Type D lines seemed to be battling against the mainstream.

Building learning regions along type D lines means engaging with learning that is collective and situational and for which a training template cannot be laid down in advance. It is understandable, therefore, that E&T actors are faced with the tension of moving from a formal learning environment to the informal one. This in fact is part and parcel of an innovative institutional change and learning process. Engeström (2001) stated that learning is about facing up to the conflicts and tensions in one's activity system to resolve them rather than progressing along a smooth developmental learning trajectory. Two of these tensions are identified here for discussion. The first is the tension between formal and informal action-oriented learning roles. The second is that between 'top-down' and 'bottom-up' thinking about management processes from the point of view of policy makers and funding bodies (see Boyle, 2005).

The first tension is that between formal and more action-orientated (situational) approaches to project management, the latter entailing informal learning. Regions are made up of actors who are formally designated by regional authorities to undertake certain roles (e.g. education and training) and those who 'voluntarily' join with others, including private enterprises, to address a regional issue. Innovation requires the participation of both these types of actors. However, there is a problem in finding agreement between those who think in terms of their formal authorised role and those (e.g. enterprises, social partners, researchers) who want to engage in experimental actions, perhaps stretching or even bending the rules laid down by bureaucracy. How can these two groups go through a process of building a workable coalition? The ethos of a region will determine the possibility of this type of coalition emerging.

Despite educational policy declarations about the importance of contributing to social and economic goals, the indicators used by educational policy makers are still individualistic 'human capital' ones, leading to the consequent neglect of collective 'social capital' indicators. Education therefore has difficulty in justifying its role in collective exercises with other bodies when it cannot justify its involvement in accordance with classical formal educational criteria.

The second tension relates to the contrast between a 'technical rational' approach to the management of regional development and a 'discursive 'one. The 'technical rational' approach is based on setting measurable performance targets/objectives in advance which can be evaluated in a technical 'scientific' way at the end of the project by external evaluators. The 'discursive' approach on the other hand is based on setting broad objectives at the beginning of the project through a collaborative consensus building process with the stakeholders, and then teasing out how these objectives can be implemented in an iterative way through joint learning processes throughout the duration of the project.

The first approach – the 'technical rational' one – is favoured by policy makers on the grounds of offering greater transparency and accountability and thus has become the standard way for policy makers to control projects in different countries. Even though there is a clear contradictory tension between these two approaches, many actors in the field of building learning regions have to somehow juggle with both these approaches, coming up with a kind of hybrid. Of course this is not just a debate about managing regional development and the processes to be used: it is also about managing and controlling money. Actors on the ground in local projects will submit to the accountability reporting and control regime laid down because that is the only way that they will get funding. But, a question must be raised about the sustainability of this 'hybrid' in the long run.

5. Concluding comments

Learning regions are about building innovative, competitive and socially cohesive local communities. They are based on cooperation, networking and partnerships involving all actors, social and economic. The key to launching and maintaining these processes is continuous collaborative learning that achieves practical community goals.

While the learning region concept is not derived from the world of education or educational theory, it demands the participation of education in the form of learning and research. Extra-curriculum learning, adult learning, continuing vocational training and action-research development programmes can become vehicles for cooperative problem-solving. Universities have a key role to play both as catalysts/moderators of action-oriented learning processes, undertaking supportive accompanying research and providing expert 'scientific' knowledge. The learning region activities are not meant to

replace formal education and training functions but rather complement them through promoting practical learning activities to meet local needs.

The interfaces between different institutions and interest groups in a region or locality are the places where learning needs to take place: people learning with and from each other. Innovation can only take place if there are forward looking institutions taking the lead in facilitating dialogue and cooperation between different actors. Education and training can play a role here by becoming the spider in the innovation-learning web.

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