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## **Could harmonised working times spell an end to the rush hour?**

**Emmanuel Munch**

*Efforts to coordinate working hours across urban territories have increased in recent years. By exploring the “desynchronisation” of journeys, these experiments aim to reduce congestion at peak times at the lowest possible cost. Field trials, while promising on paper, have been confronted with a complex and changing reality, marked by increasingly individualised daily schedules.*

The simultaneous nature of home-to-work mobility is the root cause of congestion in many transport networks, especially in large cities (Orfeuil 2005). In French urban areas, despite greater variability in working hours (Seys 1975; Chenu 2002; Sautory 2013), rush hours have not disappeared but, on the contrary, have tended to intensify around the maximum peak times<sup>1</sup> (Lavielle 2008). The only slight exception is Paris, where, in addition to this intensification, a staggering and spreading-out of commuter flows can also be observed at the margins of the rush hour (Observatoire de la Mobilité en Île-de-France 2012). For many workers, commuting is therefore a particularly tiresome and increasingly resented experience, in a society where constant pressure to optimise one’s time is reinforced by the use of information and communication technologies (Ascher 1997; Lipovetsky 2006; Rosa 2012).

Faced with the saturation of transport networks, public authorities have tended to take action that is focused on the way space is organised and used. A temporal dimension is also often present in these projects, but mainly in the form of increased speed, a criterion by which many infrastructure projects are planned and evaluated. However, the idea that a better chronological organisation of commuting may be possible has only very rarely been considered – or alternatively has been considered only very partially in the context of initiatives covering small areas (such as university campuses) or groups of companies.

In the 1950s and 1960s, there were real attempts in France to shift work schedules on a citywide scale in places such as Paris, Dijon and Strasbourg (Paturle and Blais 1977), but these were not as successful as expected, partly because they were heavily focused on optimising the city’s economic functions and networks, and were far removed from the concerns of employers and employees (Veraldi 1958). Today, the issue of urban work schedules – combining social, economic and environmental objectives, and individual and collective needs – is once again a subject of public debate and discussion, with a more collaborative approach promoted by intermediaries such as transport operators. In the Paris region, Transilien (the suburban rail network run by national operator SNCF) recently voiced its intention in the mainstream media<sup>2</sup> to work with companies in

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<sup>1</sup> The maximum peak (known as the *hyperpointe* in French) occurs at around 8.45 a.m. and 6.30 p.m. in the Paris region, and at around 7.45 a.m. and 5.30 p.m. in other French cities.

<sup>2</sup> See in particular: *Le Parisien*, 28 March 2013, “Trains saturés : et si on travaillait en décalé ?” (“Overcrowded trains: is staggered working hours the answer?”); *Le Figaro*, 28 March 2013, “Trains bondés ? Allez travailler plus tard, conseille la SNCF” (“Trains jam-packed? Go to work later, advises SNCF”); *L’Humanité*, 29 April 2013, “Flexibiliser les horaires de travail, la fausse bonne idée de la SNCF” (“More flexible working hours: SNCF’s not-so-bright idea”).

one particular area (La Plaine Saint-Denis, a major employment hub in the north of Paris) to consider varying working hours, with the aim of easing pressure on the rail network.

Could a “harmonious” organisation of working hours therefore form a key instrument for ensuring the sustainable development of our cities? And if so, how is this new organisation to be implemented, and with what tools? What are the advantages – and the disadvantages – for the different parties involved?

Based on a broad body of literature, this article attempts to provide some answers to these questions and to shed light on possible future developments. Because the management of temporal factors has little theoretical basis as such (Boulin 2008), we shall essentially aim to identify the issues and operational limits surrounding the differential planning of working hours. Some researchers have already managed to evaluate the methods and impacts of experiments in the field. References to American experiences tend to focus on the dilution of road-based traffic (Hines 1984; Giuliano and Golob 1989). In a contemporary French context, on the other hand, the key issue is generally the dispersion of passenger flows across public transport networks.

### **Are time-management policies making a comeback?**

After the Second World War, following the same principles of diffusion of demand as “Economy 7” rates for night-time electricity use, the first urban time management schemes in France were developed by national bodies such as the CNAT and CATRAL.<sup>3</sup> This state planning of staggered working hours, focusing on the economic benefits of a chronological arrangement of activities and journeys, failed to consider the notion that time – before becoming a rare commodity to be carefully managed – is a “good” to be used at the discretion of each employee and each employer in order to meet personal goals, whether that be the reconciliation of private and professional lives or improved business productivity.

Gradually, as society evolved, day-to-day rhythms became more individualised, and a greater diversity of working hours began to appear with the end of Fordism. Socio-economic structures were modernising (more women in the workplace; more service-oriented industries), and individuals were enjoying greater freedom to manage their day-to-day schedules. The synchronisation of social and family activities thus started to become an essentially individual concern. The state relinquished its role as the regulator of people’s time, and attempts to adapt working hours in French cities were gradually abandoned.

However, the question of time and urban rhythms began to make a reappearance from the 1990s onwards, with the creation of “time offices”, inspired by an Italian experiment. In 1988, female MPs from the Italian communist party proposed a bill<sup>4</sup> delegating to municipal councils the task of reorganising day-to-day schedules in their areas. Regulations were to be based on the key daily social functions (work, school, shopping, transport). With regard to transport, the objectives were, here too, very different from those observed in the post-war period: it was no longer a matter of regulating peak hours, but rather of adapting transport and public services to individual schedules, in particular for people who work non-standard shifts, for whom reconciling professional and private lives is difficult.

Rooted in different socio-economic contexts, these two periods of public action regarding urban rhythms oppose and contradict one another in terms of how the variable of time is interpreted. Time-management policies attempt to accompany societal change by providing a public transport

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<sup>3</sup> The CNAT was the Comité National pour l’Aménagement des Horaires de Travail (“National Committee for the Adaptation of Working Hours”); CATRAL stood for Comité pour l’Étude et l’Aménagement des Horaires de Travail et de Loisirs (“Committee for the Study and Adaptation of Working and Leisure Time”).

<sup>4</sup> “Women changing the times: a law to make working hours, urban times and the pace of life more humane” (in Italian: *Le donne cambiano i tempi : una legge per rendere più umani i tempi del lavoro, gli orari della città, il ritmo della vita*).

offer – and public services more generally – that is in line with the diversification of working hours and personal time-management needs. The adaptation of schedules by managing demand, on the other hand, sought to obtain a similar differentiation of working hours in order to reduce congestion at peak times, but without taking account of synchronisation needs at the micro-economic level (employer, household, individual).

Today, in the wake of these various experiments, and given the persistent problem of congestion at peak times, the idea of planning work schedules at a citywide level is appealing to a growing number of time offices, such as those of Poitiers, Rennes, Lyon, Montpellier and Strasbourg.

### **Positive experiences, but limited in scale**

Experiments have shown, on a localised level, that introducing staggered work schedules could have benefits for all three key stakeholders (employers, employees and transport operators). The advantages of these measures can be observed for each stakeholder in both socio-economic and environmental terms.

In the past, “alternative working hours” have been trialled in a number of American cities. These experiments proved, for the case of road-based traffic, that a reduction in the number of miles travelled during peak hours resulted in a significant reduction in travel time, in fuel consumption and thus in emissions of pollutants (Giuliano and Golob 1989). In France, the cities of Grenoble, Poitiers, Montpellier and Rennes have, since 2000, successfully negotiated agreements with transport operators and university heads in order to implement staggered lecture schedules, varying start times by around 15 to 30 minutes for different UFRs.<sup>5</sup> The results observed to date are promising and point towards a widespread adoption of these practices, as transport operators save money by stabilising their transport offer at the busiest times of day (in Rennes, a planned investment of €12 million to purchase three additional metro trains has been avoided thanks to this measure) and users no longer suffer overcrowded trains (passenger load on the city’s metro line at the maximum peak has fallen by 17%), and do not seem to be inconvenienced by their new staggered schedules (Nangeroni 2013).

In addition to these encouraging results within higher-education institutions, a compilation of different investigations (Munch 2013) in the context of business activities has identified conditions to ensure the effectiveness of such policies within companies:

- *Minimal staggering of working hours.* So as not to cause too much disruption to the coordination of economic and social activities, differences of 15 to 30 minutes would seem sufficient to provide significant improvements in transport conditions.
- *Bottom-up implementation.* Employers and employees should be involved in decisions regarding new schedules.
- *Choosing the right scale: business parks.* For maximum efficiency in dealing with time variables, the aim should be to minimise the complexity of the associated context (interactions between companies; physical environment, etc.). For example, a project on the scale of a business park or industrial estate is ideal in terms of feasibility, and thus also in terms of simplifying the relationships between working hours, spatial factors and mobility.
- *Company size.* The bigger the firm, the more likely it is to be in a position to adopt new working hours.

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<sup>5</sup> UFR stands for *unité de formation et de recherche* (“training and research unit”) and is the equivalent of a faculty or school (centred on a group of similar disciplines) within a university.

## An urban ideal for working times?

Alongside these observations, there are still many unknowns that will no doubt be the subject of future investigations.

If we wish to manage schedules at a detailed level (i.e. to the half-hour), then it is essential that companies and employees have the means and the desire to carefully monitor their schedules. Furthermore, the range of possible adaptations to schedules is considerable, and therefore requires prior investigation and scenario-based simulation work. We shall simply note that all these adaptations can apply to different target stakeholders, depending on their needs and specific characteristics (type of business, occupational category, distance from home, number of dependent children, etc.).

The benefits obtained from the diffusion of flows over time and from schedule changes do not affect all target stakeholders (i.e. workers) uniformly. However, in France, it can be difficult to initiate consultations and round-table discussions, as the French Labour Code is still extremely rigid. Here, therefore, it may be necessary to turn to urban-planning tools such as SCOTs (area master plans) and PDIEs (inter-company transport plans)<sup>6</sup> – if these territorial “directives” are able to integrate chronological aspects of economic activities, it will be much easier to initiate discussions unclouded by the interests of individuals, employers or trade unions.

By raising questions concerning the harmonisation of working hours in companies and educational institutions, we touch upon extremely sensitive mechanisms within our urban centres. Indeed, some might say that such intervention is more likely to worsen the situation naturally imposed by the economic and social order than to achieve real collective progress.

However, the aim here is not to even out rush-hour passenger flows at all costs. To put it another way, there is no question of producing social well-being at the expense of individual needs. By contrast, in order to create a “win-win situation”, we must try to build synergies between the collective goal of spreading peak-time flows and the individual needs of employees and employers. Indeed, there is no reason why certain new work schedules, in addition to easing the rush hour, could not also fulfil the wishes or implicit objectives of employers and workers.

In conclusion, it is only by making time management a subject of democratic debate that we will ultimately manage to consider the variable of time as an essential factor in ensuring the sustainable development of our dense urban areas. Furthermore, is it not necessary today – perhaps even more so than improving quality of life through the way we occupy the increasingly rare space available to us – to consider the urban ideal in terms of the most convenient occupation of shared time in society?

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<sup>6</sup> SCOT stands for *schéma de cohérence territoriale* (“territorial coherence scheme”), an urban-planning tool covering groups of municipalities; PDIE stands for *plan de déplacements inter-entreprises* (“inter-company transport plan”).

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