Motility and viscosity: a new understanding of mobility for better policy making

Between Vincent Kaufmann (Sociologue)
And Catherine Doherty (Sociologist)

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Through the study of mobility practices in Australia and European countries, sociologists Catherine Doherty and Vincent Kaufmann develop two different but complementary analyses of mobility potential on an individual and contextual level. Will these new concepts help further our understanding of

mobility practices and renew public action in very different national contexts? Both authors feel this will be the case and explain why.

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01. To explain mobility, you both use the concept of motility (the ability to be geographically and socially mobile) rather than the notion of transport supply and demand or economic and social inequalities. Why?

Vincent Kaufmann

To understand the way people move and how it changes over time, we need to analyse both their intentions and their constraints. This holds true for individuals, households and collective actors like companies. However, the ability to move takes different forms and cannot be limited to social position – as typically measured in the social sciences – based on education, income, social relationships or the life stages. Meanwhile, collective actors like companies have the benefit of motility, which enables them to optimise their business from a tax perspective, for example. And it is important to use concepts that take these aspects into account.

C. D

Nous avons tous deux insisté sur 1) le rôle des dispositions propres aux individus et des conditions contextuelles pour déterminer si la mobilité peut advenir et les conditions de sa mise en place, et 2) l'importance de ce double aspect dans l'analyse de toute forme de mobilité. Dans mes recherches, j'ai adopté le concept de viscosité afin d'établir une distinction analytique entre les conditions contextuelles et la motilité du sujet. Cette distinction permet d'expliquer deux domaines et approches de l'action sociale très différents. L'observation des formes de mobilité par le biais des situations économiques et sociales peut fournir des éléments sommaires quant à la nature de la mobilité. Cependant, seule une étude approfondie des facteurs contextuels favorables/contraignants (c'est-à-dire de la viscosité) et de la motilité variable des individus permet de savoir quelles formes pourraient prendre la mobilité, autrement dit, ce qui pourrait permettre de changer les formes actuelles de mobilité.

Catherine Doherty

Talking about mobility as 'supply and demand' reduces a complex social practice to the thin economic rationalism of 'homo economicus' to focus only on what is empirically observable. While such thinking has its uses, it overlooks less visible prerequisites that need to be in place before mobility becomes thinkable and doable. It also fails to explain the absence of mobility. What I like about the concept of motility is that it opens up these topics of prerequisites and the messy stuff of human aptitudes,

dispositions and emotions as important contributing factors. Similarly, explaining mobility through the structural dimensions of economic and social inequalities is important but risks being overly determinist, overlooking the potential of individual agency which is where social change can emerge. Any social analysis needs to keep both structure and agency in play. In this way the concept of motility is really helpful.

V. K

I completely agree with Catherine. One of the advantages of the concept of motility from an analytical standpoint lies is that it allows us to think about a person's "degree of freedom" when it comes to mobility and to look at the interplay between lifestyle choices on an individual or household level and determinants relative to the social structure and context.

02. How do you see the relationship between individuals' and families' ability to be mobile and the context they live in (type of area, available transport, educational opportunities, access to services, etc.)?

Vincent Kaufmann

The ability to be mobile is an attribute of individuals, whereas the local context refers to the environment's receptiveness to their plans and aspirations or to the field of possibilities that enables their ability to be mobile. At an analytical level, it's vital to make a clear distinction between individuals' ability to be mobile and the mobility potential of their area of residence. People can have a strong ability to move – because of their skills, resources or future plans – and at the same time be limited in terms of their mobility potential in the local context. There may be little in the way of transport or remote communications, as is the case in many regions of the world and particularly those in the southern hemisphere. It's also important to note that the relationship between ability and potential cannot be reduced to a mere question of inequality of access; having access to an automobile does not afford the same ability to move in Germany as it does in the Ivory Coast.

C. D

Again, I think we agree in principle – that mobility is ultimately the outcome of how the individual's motility (how 'thinkable' mobility is) interacts with the affordances or constraints of their setting (how 'doable' mobility is). For the latter, I use a concept of viscosity. These concepts can help unpack the conditions behind mobility patterns from micro scales (the daily commute) to macro scales (refugee flows, corporate relocations). My original comments also pointed to the role of experience over time – how individuals can both gain or lose motility; and how contexts may change to better accommodate

mobility, or to curtail it. In this way, the agent's motility and the context's viscosity are potentially dynamic, making mobility more multidimensional.

Catherine Doherty

In my research, I interviewed hyper-mobile military families for whom household moves were frequent. They told of cumulative effects on how members of the family coped with frequent moves. For some, the story was one of growing motility, gaining skills, strategies and dispositions that made moving easier. For others, the story was one of losing motility, as educational problems or spouse employment issues eroded any willingness to move again. So for me, the relationship is also about time, not just the context of place. I also interviewed professional families, on whose mobility rural and remote communities rely. These relatively privileged families could move on their own terms, so the nature of the local education market and lifestyle affordances played a large role in family's mobility choices, typically drawing them to larger urban centres. These choices in turn created the social problem of poorly serviced communities elsewhere. Thus there is a significant relationship between family mobility and the contexts they avoid, as well as the ones they choose to live in. For my analyses, I found it useful to distinguish between the effect of the agent's motility, and the way the institutions they dealt with could help or hinder mobility in their routines, practices or expectations. For example, a highly motile family will still find moving difficult if schools uses waiting lists that presume immobility. To better conceptualise the structural effect, I developed the concept of institutional viscosity, being the degree to which the institutional context conditions agents' accomplishment of mobility. Similarly, I argued that the concept of motility should be confined to what the agent brings to any realization of mobility. This would allow for a clearer distinction between the motility of the agent, and the viscosity of the context they seek to move through. The concepts of motility and viscosity similarly work in tandem in physics or biology.

V. K

I think this pairing of agents' motility and contextual viscosity is a vital part of the analysis. Rather than talking about viscosity, I personally use the notion of a territory's potential receptiveness to emphasise the importance of space and time. However, these concepts seem quite similar. In analytical terms I believe it is especially important to look at the ties between motility and the territory's potential receptiveness. How do these two factors, attributes of agents and the environment respectively, come together? Do they influence one another? If so, how? Does they adapt to each other? It's not unusual for the opportunities afforded by a transport system to be inconsistent with the motility of its users, like when a train doesn't have sufficient seating for people who want to use their travel time for work.

03. How could the notions of motility and viscosity be useful to key economic and political players in mobility (e.g. urban development and transport experts, elected representatives, etc.)?

Vincent Kaufmann

In today's world, the players – whether they be individuals or groups – have high levels of reflexivity and motility. Even if these abilities are not distributed equally, people are able to divert public policy from its original purpose. The conjecture of reversibility is a good example of this. The speed potential of a motorway or a high-speed train line can reduce spatio-temporal friction and increase the spatial range of people's daily commutes to avoid changing domiciles. In other words, it enables them to do "far away" what used to be done "nearby". It's certainly the case in Switzerland, for example, with mainline train service being used on a massive scale for long-distance commuting. The result: more than 10% of the working population now has jobs that are more than 50 kilometres away from home. So, taking account of people's motility, studying it, and being able to integrate is crucial in order for public planning to be effective. By incorporating the "Conjecture of reversibility" into local development, it also becomes possible to create other policies, by using low-speed transport as a tool for regulating urban development. Notably, by not providing a high degree of accessibility, it is possible to maintain a local way of life that is rich in amenities and sense of community.

C. D

In this comment, Vincent uses the term 'friction', a metaphor which Cresswell also uses to refer to the forms of resistance that contextual factors create for mobility. For me, friction and motility are mixed metaphors – the first referring to solid states, the second to fluid states. I would suggest that viscosity, being the partner concept for motility, is better suited to the mobility paradigm, and to other social theory that is concerned with 'flows'. Vincent has given interesting examples of how mobility patterns can be expressed more as a matter of time, than of distance; and how one enhanced form of mobility (commuting) can sponsor another scale of immobility (not relocating the family home). I'm sitting in Australia, a very different context in terms of population density, distances between towns, with less potential for economies of scale to sustain transport services, so our policy makers face very different contextual challenges. On the other hand, 50 kilometres doesn't seem very "far away" to Australians. Such notionally objective measures are relative, depending on context and conventional expectations. Vincent's examples also speak to there being no ideal combination of low viscosity with high motility. Rather good policy will explore the potential for judiciously crafting differently textured conditions according to the kind of sociality desired. While attention to mobility might focus on transport systems, researchers and policymakers could also think about how we live and move through other social structures, and how the spatial and temporal requirements of these other life settings can make mobility more or less thinkable and doable. One example would be the opening and closing hours for child care services – what kind of 'commuting time' around the working day do these institutions allow for?

Catherine Doherty

By separating the agent’s potential of motility from the structural quality of viscosity, policy makers can make sharper analyses of mobility patterns then craft more nuanced interventions to create their desired changes. Mobility is the result of how motility and viscosity interact. Effortless mobility realized through a combination of high motility and low viscosity is not necessarily a good thing in itself. Rather, the appropriate degree of viscosity and the desirable degree of motility will depend on the social context, goals and circumstances. By having both concepts to think with, policy makers have more levers at their disposal, and more possible responses: adjusting institutional practices that contribute to viscosity issues, and/or addressing the motility prerequisites for individuals. An obvious example is the ticketing practices in public transport services. Over time, ticketing has been streamlined (lowering viscosity) with the introduction of innovations such as tap on/tap off cards. This change to institutional practice proactively encourages the flow of commuters to keep moving (low viscosity, high motility). In airports however, security, passport and customs checks are designed to slow the flow of people down (higher viscosity, high motility) so the necessary checks and precautions can be taken. Less obviously, schools have historically served resident populations (high viscosity, low motility), so the high viscosity of their routines and expectations can be difficult and inconvenient for the comings and goings of mobile families. However, schools that dignify the demands of mobile populations may develop proactive practices (lower viscosity, high motility) such as: holding a number of places open for families who can’t satisfy waiting list requirements; buddy systems to welcome new students into friendship groups; and routine communications with previous and subsequent schools to facilitate continuity in programs for mobile students.

V. K

On the whole, studying the extent to which agents’ motility and the potential receptiveness of the territory they live in is key to understanding what underpins people’s mobility. A wide range of systems such as social security, the local property market and public transport encourage people to choose one approach to mobility over another based on their potential to adapt offer. In this respect, it is quite common to find contradictory forces that lead people to engage in a system of complex trade-offs. In this area, it is not unusual to observe contradictory injunctions that force actors to make complex choices, like when a couple wants to buy a home in a dense urban area but is limited to the suburbs by a lack of buying power. In such a case, the only choice is to become a homeowner in the suburbs or living in the city.

Vincent Kaufmann

Sociologue

Vincent Kaufmann, a Swiss sociologist, is one of the pioneers of mobility and inventor of the concept of motility. He is director of LaSUR at the EPFL, General Secretary of CEAT and professor of sociology and mobility analyses. He is the Mobile Lives Forum's scientific director.

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Catherine Doherty

Sociologist

Catherine Doherty is an Associate Professor in the Faculty of Education, at the Queensland University of Technology (QUT) in Brisbane, Australia. She works in the sociology of education, with research interests around the educational choices, concerns and strategies of mobile populations, and the associated issues for curriculum design and pedagogy. She has published research on international students in higher education, and internationalised curriculum in secondary schools. Her recent book with colleagues, Family Mobility: Reconciling Career Opportunities and Educational Strategy, was published in Routledge's Changing Mobilities series.

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