

1. Videos

The significance of friction

By

Tim Cresswell (Géographe)

12 November 2013

Tim Cresswell is a professor of Human Geography at the University of London. His research considers the role of geographical ways of thinking in the constitution of social and cultural life. He reflects on the friction of mobility, a crucial aspect to him.

I want to start with some words written 200 years ago by the Prussian military theorist and soldier, Carl Philipp Gottfried von Clausewitz in his treatise on moral philosophy of war.

“Suppose now a traveler, who, towards evening, expects to accomplish the two stages at the end of his day’s journey, four or five leagues, with post horses, on the high road—it is nothing. He arrives now at the last station but one, finds no horses, or very bad ones; then a hilly country, bad roads; it is a dark night, and he is glad when, after a great deal of trouble, he reaches the next station. He finds there some miserable accommodation. So in war, through the influence of an infinity of petty circumstances, which cannot properly be described on paper, things disappoint us, and we fall short of the mark.”

Clausewitz placed the notion of friction at the heart of his analysis of the battleground. Clausewitz’s treatise was based on his experience of the Franco-Prussian war at the end of the 19th century and published after his death. His central argument was that war produced a continual fog, a fog of confusion where perfect knowledge of a situation was never possible. The details of war always got in the way of attempts and obstruction in attempts to execute the perfect war. It is in these details that he grouped under the heading of friction that Clausewitz’s treatise has relevance to the way we think about mobility today. So here Clausewitz used a thought experiment, a travel to illustrate the multitudinous impediments to the conduct of war. His concept of friction borrows from physics but is resolutely social and human. The friction of physics is relatively simple. The social as is always the case is many times more complicated. At the heart of Clausewitz, friction is a stubborn stickiness of what he often called the real world. Things just don’t turn out the way they are planned even for the powerful. This enormous friction he wrote which is not concentrated as in mechanics at a few points is, therefore, everywhere brought into contact with chance. And thus incidence takes place upon which it was impossible to calculate the chief origin, the chance.

Friction: a social and cultural phenomenon attached to mobility

Friction physics tells us is a force which resists the relative movement of two materials against each other. Sometimes friction is sufficient to prevent motion and other times, it just slows it down. It can occur between moving bodies, between a moving body and a stationary object or between stationary bodies. But social friction like mobility can apply in the world of meaning and can be the result of arrangements of power. Friction, here is a social and cultural phenomenon that is lived and felt as you are stopped while driving through the city or in counter suspicion of check-in at an international airport. The significance of friction is in the way it draws our attention to the ways in which people things and

ideas are slowed down or stopped. One reading of the mobility turn in the humanities and the social sciences is seen as an analysis of a world of flow where friction has been reduced or nearly eliminated. Some thinkers paint a picture of a world where the key actors in the process of globalization can travel easily, in a self-contained and seemingly frictionless bubble. This idea of global frictionless mobility is misdirected, that's a mistake. When we think about world in motion, then we have to think about friction because anywhere the motion occurs then friction occurs, just as in war in Clausewitz's treatise that the best laid plans are ruined by chance. Chance, friction, events that are beyond our calculations are always happening even in a globalized world where people are often more mobile. So I am just thinking about -- mobile world means thinking about friction and taking it seriously and taking it seriously in relation to the ways it's distributed and the different ways in which it attaches itself to various forms of mobility as they are enacted.

Friction enabling mobility

It's also important to think about friction not just as a way of stopping or slowing down mobility but as a way of enabling it. So when you think about what friction does in the physical world, imagine trying to walk or run with smooth soles on a perfect ice surface. The only mobility that would happen is you falling down. Then imagine you with rubber soles on an asphalt surface where friction exists between your shoes and the surface and you can move. So friction does two things. It does slow things down, it does stop things, but it also makes things move and it enables things to move. So thinking about mobility isn't just imagining a world of flows where friction has disappeared as sometimes happens in the more extreme versions of globalization, discourse and in mobility studies and it's about thinking about the relationship between moving and texture and friction and all kinds of things that are interrelated -- that are more or less stationary but interact with mobile objects, people, things.

Friction and power: an unnecessary relationship

There's also no necessary relationship between friction and power; the easiest thing I think is to think of friction as moments when power or people in positions of power are able to stop the relatively powerless.

1. Friction imposed upon the powerless

So we can think of borders we can think of security, we can think of gates, we can think of all those times when people are stopped or objects are stopped because it also occurs when a container of things enters into national territory at a port, it's scanned, it's logged into customs. It has to stop briefly before it carries on, on its journey. Perhaps the most obvious example of one of the most recent, sort of, spectacular examples of this sort of politics of friction is in the hunting of Osama bin Laden. The geographer, Derek Gregory has talked about this at great length and I am going to draw on his ideas here. Osama bin Laden was eventually killed several hundred miles from the last place he was seen after, what was it, ten years or something, I think roughly. And the way he was killed, the reason he was killed was through practices of surveillance that occurred over thousands of miles. Now particularly technologies involving drones, for instance, drones which are now used in Afghanistan and Pakistan, over Yemen and other parts of the world, which are piloted, navigated and operated from Air Force bases in the desert in United States or in Britain and other places. These drones are enacting a kind of removal of friction if you like. The border between Afghanistan and Pakistan doesn't appear to mean anything to them, where they can simply fly over it and they can look at and see and operate on the ground over great distances instantly. So we can see this as a kind of a challenge to friction, overcoming friction, whereas the movements of Osama bin Laden had to be, were constantly being restrained even though he wasn't seen often, even though he wasn't captured or killed for a decade, he couldn't move very far.

So what the US and allies were doing was imposing friction upon his movements, at the same time as they were removing friction for their own. So this operationalization of friction, this distribution of friction, unevenly, is part of the theatre of war that Clausewitz was talking about in the contemporary world.

2. Friction imposed upon the powerful

But even though they were able to do that, it did take ten years remember. It wasn't very easy, but still they were able to do that. Even though they were able to do that, there were ways in which friction began to impose itself back upon on the US and its allies. So Derek Gregory talks about the logistics involved in warfare and how the Pakistan was able to close down the border between Afghanistan and Pakistan so that American logistical operations couldn't happen on the ground between the two spaces and make their operation of war in Afghanistan much more difficult. So Pakistan was able to re-impose friction upon the United States. And here I think we see a second's moment of friction which is a moment where friction is used by those who are relatively powerless in the face of the powerful. So if we think about space and mobility in two different ways, one way in which power can work is that space is defined clearly by the powerful and the mobility is, the mobility in people who are relatively powerless and we can think of people moving through cities, we can think of terrorists, we can think of criminals who can work through mobility despite the fact that there are nation states -- or drug smugglers, anybody, the mafia, all kinds of work through mobility in the face of territory which is a space of the powerful. But we can reverse this at the same time and we can think about mobility being -- the powerful being able to do what it wants around the world and friction being imposed upon the powerful by small moments of time where the relatively powerless are able to impose friction upon the powerful and the second of these most closely resembles the fall of war in Clausewitz's history. So he is talking about a chance. So in many ways this is reassuring then, while there are instances of the relatively powerful imposing friction on the powerless, it's also possible to think about forms of friction as what James Scott has called the weapon of the weak to impose friction upon mobility.

Flow produces its own coagulation

So how much the theorists of flow talk about a world that's increasingly mobile, increasingly what Castells called the space of flows which is he argues replacing a space of places. However much that may be the case, there's always moments of friction which produce blockages and coagulations in the spaces of flow. Flow produces its own coagulation. Anything that flows is going to produce friction as much as overcome it, movements produce their own frictions. And this instance is illustrated by the way in which seemingly global flows fail to have any impact without encountering things which are stationary. If we talk about the flow of capital, if we talk about the flow of goods, if we talk about the flow of people, all of these things become kind of the sound of one hand clapping, if they are not encountering place, encountering things that are relatively stationary. Capital can't just move; it has to find spaces to latch itself too. People don't just move endlessly; they are moving across particular kinds of terrains and to and from particular kinds of places.

The making of friction: universals meeting the particular

Now one of the most theoretically interesting accounts of friction is given by the anthropologist, Anna Tsing. And she talks about friction as the grip of worldly encounter. Tsing's work revolves around the forestry industry in Indonesia and the way in which global flows of ideas, capital, and politics transformed as they encounter place, the specific. Space, she talks about, as having a sticky materiality of practical encounters. So, all such things as national borders or literal roadblocks are certainly kinds of friction. Tsing doesn't start from there. She starts instead an encounter between what she refers to as universals, things that attempt to be universals like science or capital or truth, which we can think of attempts of mobility and the particular that is the particular places that they have to touch upon or land in, pass over.

So she doesn't start with mobility, but universals and she argues the universals although they are mobile are spread through connections and are by definition global. They need to spread out in order to fulfill their existence as universal. So universal thing has to be global, otherwise it's just not universal. She is interested in the way in which mobile universals such as capital, truth and science encounter the particular wherever they go, particularly in her case, Indonesia. Universals she argues only become

something real when they encounter the particular and then that's when friction happens. Friction militates against the idea of a world of unimpeded flow as double-edged. On the one hand we can think of friction as blockages that stop mobility, but on the other hand, friction is necessary for things to move. If you try and run on ice in shoes with smooth soles, you simply fall over as I mentioned before. The universals that travel through global connections can only travel through their purchase on particular places and always on different situations. So the universal, they are kind of the universal by attaching themselves but the paradox is as they attach themselves, there's a universal such as truth or science or capital, it becomes particular then it transforms to something other than the universal. It becomes capital or truth or science there and that's always different from where it is somewhere else.

Friction makes the actualisation of universal possible

So the dance of mobility and a friction then interferes with dreams of unimpeded mobility and these dreams include the world of instantaneity that Paul Virilio has talked about, the idea that you can press a button and something happens somewhere else and the worlds of capital things and knowledge, they give shape to the fantasy worlds of neoliberal globalization projects. Global mobility from above, the idea of the space of flows seeks to seep itself into every pour, every instance, every space around the world, every nook and cranny of the actually existing world that we live in. But everywhere it goes, this mobility from above encounters the friction of context and the particular and this gives universals shape and efficacy. "All universals are engaged universals and they have to pay, convince us to pay attention to them", Tsing writes, "all universals are engaged", she writes, "when considered as practical projects accomplished in a heterogeneous world". My heterogeneous world is not a smooth globe; it's a world of friction. It's a world where things that are moving have to encounter the particularity of where they are and in order to be universal, they have to do that. Then at the same time, they become particular at that particular moment. So, just as it would be impossible to walk without friction, so friction makes the actualization of mobility of mobile universals possible only at their expense of their existence as universals. It becomes particular. Universals, which have to be forms of mobility to be universal, can only experience becoming through the way in which they are made particular through friction and in place. So that's quite complicated, I think, but the idea is the friction becomes important because it makes mobility a particular experience. It's never just a universal kind of world of flow where everything is the same. It's always mobility where it is. And that particular moment is a moment of friction that allows mobility to happen but at the same time, makes it something other than universal.

Hot spots of friction

So a byproduct of friction in a physical sense is heat or fire even. The energy of mobility is converted into heat. If you think of heat metaphorically and socially, it's possible to imagine social heat. The grinding mobilities against each other or mobilities against relative stillness produces hot spots, fiery points of contestations such as the border of Afghanistan and Pakistan, such as the kettles enacted by the police in order to control marching protestors in London, such as the Saudi reactions to women attempting to drive in a country where women are traditionally haven't been allowed to drive. Friction and the heat that it produces, I would argue, has the potential to highlight the power geometries of mobility. It can make what is often the smooth hidden working of the spaces of flow, suddenly visible, suddenly particular, suddenly contextual. Friction can be based on symptom of mobile contestation and something that is itself contested. Where, when and how does friction occur? Who produces it? Who ameliorates it? Who is affected by it?

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x

Movement

Movement is the crossing of space by people, objects, capital, ideas and other information. It is either oriented, and therefore occurs between an origin and one or more destinations, or it is more akin to the idea of simply wandering, with no real origin or destination.

En savoir plus x

Associated Thematics :

Lifestyles

- Inequalities

Theories

- Concepts
-



Tim Cresswell

Géographe

The same author [See all publications](#)



Mobility: the lifeblood of modernity and the virus that threatens to undo it

Tim Cresswell



Transitioning toward low-carbon mobility: a holistic approach to transition policy

Video by Tim Cresswell



Ne pas dépasser la ligne !

Publication by Tim Cresswell, Mikaël Lemarchand, Géraldine Lay

To cite this publication :

Tim Cresswell (12 November 2013), « The significance of friction », Préparer la transition mobilitaire. Consulté le 18 December 2024, URL: <https://forumviesmobiles.org/en/videos/1813/significance-friction>

 Licence Creative Commons

Videos by Forum Vies Mobiles are licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 France License.

Permissions beyond the scope of this license may be available at contact.

Other publications



Geographical re-placement

Thierry Ramadier



Are homeless people "vagrants"?

Projet collectif SciencesPo/Architecture Bordeaux



The injunction to mobility

Christophe Mincke



The weight of daily life: women facing mobility

Anne Jarrigeon

1 <http://creativecommons.org/licenses/by-nc-sa/3.0/fr/>

2 <http://forumviesmobiles.org>

3 <http://creativecommons.org/licenses/by-nc-sa/3.0/fr/>

4 http://fr.fvm.localhost/modal_forms/nojs/contact