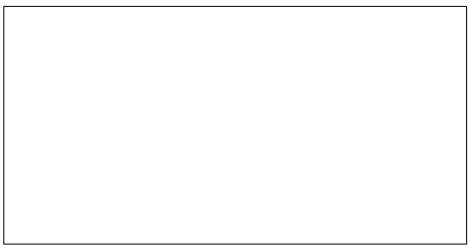

# Trajectories in Platform Capitalism


## Abstract

Platforms are digital ecosystems that bring together various actors to form multi-sided markets. This bringing together entails an organisation of trajectories that in turn organise those moved by them into experiential and existential orders. This article sets out a general account of trajectories under these conditions, first identifying three kinds that animate a system of platform capitalism: 1) Data Trajectory as the movement and representation of information; 2) Logistical Trajectory as the movement and organisation of commodities; and 3) Moral Trajectory as the movement of bodies that are moved by and towards others. Each kind is then given form by three properties: i) the *traject* picks out what is in motion and how it is moving; ii) *trajectography* is the space that is co-constituted by this movement; and iii) *trajectivity* refers to the subjective positions that are encouraged by mobility through (or occupation of) these spaces. The article demonstrates the application of this schema through the example of the retail platform Amazon, showing as it goes how data and logistical trajectories combine to congest, reroute or derail moral trajectories.



## Keywords

Data Mobility; Digital Infrastructure; Logistical Space; Moral Experience; Online Retail



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Platforms are digital ecosystems that bring together users and services and products in an interactive transactional environment constituted by organisations of trajectories. Culpepper and Thelen (2020) identify three broad types of platform: the service platform, such as Uber; the goods platform, for example Amazon; and the information platform, exemplified by Google. These platforms 'play an outsized role in modern life' (Culpepper and Thelen 2020, 289) precisely because they provide an infrastructure for its conduct. As Langley and Leyshon (2017, 16-19) note, what unites these different entities as platforms is the way that they capture value from the transmissions and interactions of digital media, that they are all multi-sided markets – not just business-to-consumer or business-to-business but user-to-user too – and that they are not simply channels for communication but actively compel, construct and configure the way that users, data and commodities are on the move.

Benjamin Bratton (2015, 50) observes that, whilst it is possible to associate platforms with a particular kind of product or service, their operation often differs from the user-level experience. As Nick Srnicek (2017a, 50-58) suggests, a platform might appear to offer social networking or ridesharing or search results but is really in the business of advertising or lean labour markets or capitalising digital infrastructure. We might tend to think of platforms as political or cultural actors, Srnicek (2017b, 254-255) argues, when underneath all this they are primarily economic entities. Langley and Leyshon (2017, 14) conclude that the platform is 'a distinct mode of socio-technical intermediary and business arrangement that is incorporated into wider processes of capitalisation'.

It is in this context that we might talk, as many of those referenced above do, of *platform capitalism*. Jonathan Pace (2018, 262) understands digital capitalism as 'the collection of processes, sites, and moments in which digital technology mediates the structural tendencies of capitalism'. Platforms bring together these processes and moments in sites of movement that

are tailored to the structural needs of capital. Capital as a process – as an expression of value – entails the continuous translation of value into its different forms: money, labour, commodity (see Harvey 2018). Communication (including transport) has always been vital to circulation. The mobilisation of data through platforms has become an essential part of the circulation of capital in the face of crises of accumulation (Sadowski 2019). Staab and Nachtwey (2016, 458) understand platforms as 'quasi-monopolies' that gain market control – in part due to digitalisation and its scaling effect – and that in turn stabilise the monopoly form itself.

In more experiential terms, when we search for things we use Google and when we buy things we use Amazon because they have become the environment for the conduct of these activities in ways that entrench their position in the market and in our experiences of everyday life. Through sheer scale the platform then becomes an optimal site for price setting and the creation of profit. Platform capitalism is then the concentration of capital through a distinct infrastructural ecosystem and, more broadly, the mediation of the structural tendencies of contemporary capitalism.

Recent work has examined the relationship between market control and labour control in these conditions (Dyer-Witheford 2015; Fuchs 2014), particularly how platform labour is captured and intensified (Delfanti, 2021; Staab and Nachtwey 2016). This article is intended as a supplementary account by focusing on how these ecosystems are experienced as everyday environments. It is motivated by John Durham Peters' (2015, 1) observation that digital media 'are not only devices of information; they are also agencies of order', but formulated also in reverse, that digital platforms are also orders of agency, that is, that they organise the subject into experiential and existential orders. The question then is: When we are brought together into these platform ecosystems how is the experience of their process constructed as an

experience that subjectifies their users? More specifically: How does this ordering of agency influence the moral experience of existing within an everyday shaped and facilitated by these infrastructures?

This focus is justified in two parts. First, a focus on the user/consumer is complementary to accounts of platform labour since the scale of platforms and their resultant largeness in everyday experience affords them an indirect power that can be used to undermine regulation and intensify labour. As Culpepper and Thelen (2020) argue, when platforms provide the infrastructure of everyday life – when catching a ride means Uber or keeping in touch means Facebook – then they generate attachments that in turn cement political alliances with consumers that can be used to justify or further their practices. By focusing on how platforms construct experiences of their processes we can better understand how the violence of digital labour is sanitised or hidden to co-opt indirect political support.

Second, an attention to the moral dimensions of this experience reinforces the location of the problem in production. An attention to moral experience allows us to look past ethical consumerism and focus instead on how platforms construct experiences in such a way that they obscure the real violence of capital. If we think not of ethical consumption but of the consumption of morality, its depletion and degradation as a mode of awareness, then we better understand how moral agency is turned away from the injuries of platform capitalism and how those injurious conditions become entrenched (see Hill 2020). Overall, by looking at the everyday experience of platforms and what this ordering of agency achieves, we can better understand how platforms, as Srnicek (2017a, 3) puts it, give capital ‘priority of agency’.

To achieve this, the article presents a typology of kinds of trajectory (or ordered mobility) that construct the experience of the platform: Data Trajectory, Logistical Trajectory and Moral Trajectory. Data Trajectory captures the transmissions of data that sustain the platform as both an environment and as a system of transactions. Logistical Trajectory is meant in a broad sense as the transmission of things or, more precisely, the organisation and execution of object mobility for the fulfilment of transactions. And Moral Trajectory speaks to the way that the movement of bodies is always a movement towards or away from others, and therefore is unavoidably, and perhaps fundamentally, a question of moral experience that stands above any transaction.

These then are our kinds of trajectory, but what, in ontological terms, gives something the quality of a trajectory? It is argued here that we can identify three constitutive properties that give these kinds of trajectory their specific dimensions: the *traject*, *trajectography* and *trajectivity*. This is a language that is borrowed from the work of Paul Virilio (for example in Virilio 1999; 2008b; 2010), who uses it in giving an account of the effect of speed and technology on social existence and moral experience. But given the (productively) unsystematic nature of Virilio's approach to the work of theory (see Hill 2019) it is unclear whether the repetition of these terms across texts holds a consistent meaning. They are infrequently defined and appear to operate in different ways when iterated. As such, it seems appropriate to fix their meaning here, and not to be too concerned about what Virilio would have made of it. The *traject*, then, picks out what is in motion and how it is moving; *trajectography* is the space that is co-constituted by this movement; and *trajectivity* refers to the subjective positions that are encouraged by mobility through (or occupation of) these spaces.

This typology represents a kind of conceptual taking stock by setting out ways of capturing and understanding platform trajectories. This is undertaken with the intention of shaping future analysis and investigation of platforms, although it is not meant to foreclose or exclude other vantage points for seeing the orders of agency on the move in platform capitalism. The properties that make up each kind of trajectory will be instantiated in different ways for different platforms, but in order to demonstrate how all of this works the focus here will be on Amazon.

For the purposes of this demonstration Amazon has the status of an explanatory device and its role is to give some solidity to what would otherwise present as a more abstract conceptual schema. It has been chosen because few platforms reach the same kind of scale (Culpepper and Thelen 2020), and so the use of this example reveals the dynamics other platforms would enact to achieve a similar power and position. Additionally, in achieving this scale Amazon now encompasses so many of the functions of different types of platforms that it picks out processes that have a wider extension to other examples. Each section of the article takes one of the three kinds of trajectory and explores how it is constituted by the relations between its *traject*, its *trajectography* and the *trajectivity* that they institute.

The first section explores how data co-constitute an online space that facilitates the operation of platform omnipotence, interpellating users as subjects of data power. In the case of Amazon, the collection of data-in-motion at scale necessitates constantly updating environments (website, apps) that encourage an unconscious consumption of commodities.

The second section argues that data power is secondary to logistic power, that is, that it serves a struggle for control over the movement of the world's objects, which creates latent logistical

spaces that facilitate the constitution of consumers as subjects of exploitative relations of capital, labour and space. With Amazon, this manifests as the putting to work of data power in order to totalise and mobilise global commodities, creating a distributed and patchwork logistical space, held in tension but with an appearance of smoothness – of mobility across a smooth space – effected by its next day or same day delivery.

The third section then reframes the work of Emmanuel Levinas as a moral philosophy of trajectory, that is, as a movement of the one body towards the other, initiated in the coming and going of the dwelling and consummated through the act of being moved by the other, to provide a groundwork for understanding trajectories in terms of moral experience.

The conclusion will draw this all together through a doorstep vignette, a preliminary working through of the typology in the specific moment of receiving the goods. This gives an initial indication of how moral experience is impacted by the dominance of the trajectories of data and logistics under conditions of platform capitalism, before the article closes with ideas of how this general account of trajectory might be applied more widely or more deeply than this demonstration permits.

**Data Trajectory**

Platforms are environments that are perfectly geared for the capture of data. As Adrian Athique (2020) points out, every time we shop with Amazon we are producing data as a market commodity. Users are integral components in the platform's integrated infrastructure. We might not know it – or we might not think about it – but we are put to work for the circulation

of data. As such, data trajectories are not only central to the function of the platform, they also reorient users in terms of spatiality and subjectivity.

*Data Traject*

Wendy Chun (2017) wonders why, when they are so ephemeral, we tend to think of data primarily in terms of storage. Data are mobile and fleeting even if their effects are moored and lasting. In order to understand the *data traject*, that is, not only data but the way that they move, it is important to examine the way that data are constructed for movement. For companies like Amazon, the most important configuration of data mobility is the achievement of scale, speed and agility (see Beer 2019, 45). That is, data platforms are at their most profitable and most efficient when they are handling large amounts of data; when data move quickly; and, best of all, when large amounts of data move very quickly. Underpinning this is the desirability of analysing data-in-motion rather than data-at-rest (see Beer 2019, 65), which allows for real-time processing of data, adding immediacy to the value of the analysis. As such, the limitation of bandwidth – the finitude of transmission – is a defining constraint when it comes to the trajectory of data.

Data compression saves bandwidth by eliminating redundant information – or at least what data engineers consider to be redundant – which increases signal definition by increasing the amount of valid data that can be transmitted or stored. As Jonathan Sterne (2015, 35) observes, 'compression is the process that renders a mode of representation adequate to its infrastructure'. This means that whilst it might increase signal definition, compression does not necessarily guarantee a greater realism in transmission. This is a point that is made clearer with reference to Jean-François Lyotard's *The Postmodern Condition* (2005). Here, Lyotard observes that knowledge has to be made to fit the channels of its communication, that is, to be made

operational. Whatever does not fit is abandoned, whilst knowledge becomes a commodity given over to frictionless exchange. What we know then becomes a product of what we can fit in cables.

In *The Inhuman* (2004) Lyotard argues that once things are rewritten as bits, they are rendered independent of the time and space that gave them their original meaning. Data, then, have been unmoored before being made mobile. David Beer (2016, 57) explains that data must be made sufficiently similar in order to be measured according to a given metric, whilst remaining sufficiently different so that a comparison can be made. But that process of making-similar conceals, excludes and devalues at the same time as it visualises, collects and evaluates. This means that the social world is stripped back to a homogenous state in order to facilitate circulations, losing diverse narratives and contexts so that new meaning can be inscribed on the world.

That said, whilst inscribing knowledge as data might decontextualise it, as per Lyotard, once the data are mobilised they enter a process of recontextualisation. In order to have a bit of data to send on its way, you first have to start out with meaning stored in a different medium and strip it out; this datum is then analysed in parallel with other data (see Beer 2019, 78-79 on parallelisation), creating a new, data-bound context. Essentially, context-based information is rendered into contextless bits and then reconstituted into information whose context is other data situated in an analytical clinic. For all that data engineers talk of 'raw data' (see Beer 2019, 81), it has already been cooked. The demand for agility and compression determines what moves and how it moves. As such, the decisions made with data – what they are allowed to mean – have already been informed by the way that the *data traject* is mobilised.

*Data Trajectography*

The infrastructure of the internet makes up part of the *data trajectography*, a critical space of cables, data servers and other material channels of transmission (see Holt & Vonderau 2015; Starosielski 2015; Plantin & Punathambekar 2019) that facilitates the mobility of data. The data clinic, discussed by Beer (2019), is another part. These latent worlds configure the trajectories of platform capitalism. But data trajectories are not just decontextualised and hidden, they also form new contexts, that is, new geographies of action and experience. The user-end experience of this is the interface.

Interfaces are an opening onto the processes of transmission that underpin transaction through platforms. They are also sites for collecting data that are in turn formed by the data they collect. Take Amazon's website, which Bratton (2015, 131) describes as 'gargantuan', and that lists hundreds of millions of individual items for sale. As Martin Dodge (1999) observed, in one of the earliest critical accounts of Amazon, its website gives the impression of being customer-centric by offering a range of products so vast that no other store could rival it for satisfying a given user's desire. The website (and app) *are* customer-centric, of course, although mostly insofar as the customer presents data as another commodity for Amazon to mobilise. Interfaces train users to interpret the platform in certain ways through repetition of tasks. Chun (2017, 2) argues that they establish habits that they then undermine by changing the environment of action. Repetition establishes links that are then broken so that users must then forge new ones.

Dodge (1999) described Amazon's website as its shop window, a geography of the screen, but it was always just its shop – albeit one that changes every time you enter it *because* you entered it. Each time you visit the site there are new items recommended, new links to items inspired by your purchases, a different category of things to peruse – all based on data gleaned from the

previous moves you made whilst visiting. The environment of consumption changes according to your consumption, asking you to navigate it now in new ways. Essentially, Chun (2017, 74) suggests, users are being disrupted because disruption demands action, and actions generate data about that user that can be attached to their decision. And then it happens all over again, in a cycle of constant update.

This is what makes the interface interactive rather than purely consumptive, and it all works to optimise the data capture system. What Chun describes here is a consequence of what Lyotard calls the delocalisation of breaching. Habit 'structures a certain type of behaviour in a certain type of contextual situation' (Lyotard 2004, 48). The stability of this structure allows for the easy repetition of behaviours. Habit, then, is a kind of breaching, that is, a process of putting things into a series. These habits, for Lyotard (2004, 49), have only ever made sense when situated within 'a customary space-time' that gives form to the sequence. Once the breaching is situated at the point of an interface, it has already been decontextualised by data and so made easier to disrupt.

Bratton (2015, 219) suggests that how users experience platforms is tied to how they experience and understand the world, such that we should talk of 'ambient interfaces' (368) as a combination of the user's physical world with the digital. But there is only one world, and the idea of an ambient interface is less useful than an understanding that the geography formed by data is just another part of our lifeworld. Cables, servers, interfaces, the desk you type at, the way the light hits the screen – all of these combine to form the *data trajectography*. The space is impelled by the *data traject* (the way data needs to be collected informs the architecture of the platform) but it is also formed by the phenomenological experience of the user that interacts with the platform.

*Data Trajectivity*

The greatest power a platform possesses is the ability to make us think the world is one thing and not another. Beer (2016, 48-49) argues that data become bound up with power when their processing supersedes judgment and subjectivity in order to make the world according to the platform's measure. The platform governs trajectory and, in so doing, situates users as subjects of a *data trajectivity.* Circulating data intervene in the social world and delimit what is possible. The platform is then able to create unequal outcomes; to determine value and, therefore, what is desirable; and to have power over what is seen and what is unseen (see Beer 2016, 127). Platforms see data mobility as key to real-time knowing, but the compression of those data and the breaking of habit through the interface mean that the form knowledge takes is determined by its mobility. Platforms might be all-knowing, but only because they have decided what is (useful) knowledge and what is not.

Chun (2017, 40) argues that the goal of data collection is to program users to act in certain ways – to act as consumers and to build on existing habits whilst being socialised into new ones. For Beer (2016, 49) this means using data to make decisions for users without it appearing as if a decision has been made. In such a way, the user feels free as a consumer whilst being carefully managed through the process. Beer (2019, 1) states that the most important question we can ask is: Who has the power to speak with our data? This evokes the operating question posed by Lyotard in *The Postmodern Condition* (2005: 6): 'who will know?' That is, who will know what decisions are to be made and what is to be decided? For Lyotard, the answer was whoever would have access to the data. Today, that is a power held by platforms – and it is a power wielded in ways that transform our experiences of the world.

The ubiquity of Amazon – a product of its easy interface and the tendency of platforms towards de facto monopoly – programmes users as ubiquitous consumers, casting consumption as an 'unnoticed component of social reality' (McGuigan & Manzerolle 2015, 1832), a kind of unconscious act that goes unquestioned because the arrival of our orders gives no answers as to their origin or the labours that brought them to our door (see Hill 2020). The fulfilment of desire becomes automatic. Bratton (2015, 331) argues that Amazon's 'supply chain omniscience' allows it such a comprehensive overview of its suppliers' operations that it can set prices at the tightest of margins. This data-based pansophy is in turn used to keep the obligatory effort of the low-paid platform labour that sustains the whole operation at a maximum level (see Srnicek 2017a; Hill 2020).

Bernard Stiegler (2016, 25) suggests that Amazon has a 'hegemonic power', which tallies with the earlier concern of Lyotard (2004, 50) for the 'hegemonic teleculture' that would follow from the narrowing of knowledge and unmooring of habit through technology. Amazon's data power consists in its ability to make online retail ubiquitous at the same time that it becomes ineffable, hiding with it the power to orchestrate the movements of suppliers and workers to make the whole run so smoothly as to evaporate into the ether. Lyotard (1998, 159) gives another name to this, apt for the way that consumerist desire is shaped and then fulfilled by low-paid labour and low-cost suppliers that are made low-paid and low-cost by the putting to work of its data wealth: 'Mr Nice Guy totalitarianism'.

**Logistical Trajectory**

Amazon's data wealth is put to work organising the totality of the world's things. Data power here serves logistical power. Logistics can be understood broadly, as Virilio (2008a, 112)

indicates, as 'the event of movement', or, as the meaning-making of mobility. The platform mediates this meaning-making by refracting the experience of logistics through the interface. Srnicek (2017a, 50) suggests that, despite appearances, Amazon is not so much an online retailer as it is a logistics company. We can understand Amazon's logistical process historically as an extension of the 'logistics revolution' of the latter part of the twentieth century (see Bonacich & Wilson 2008). The delivery of packages to the home is one of Amazon's core functions, and so the focus here is on cargo mobilities and the way that they make meaning through the event of movement.

*Logistical Traject*

To have total control over the movement of things – of the *logistical traject* – is to foreclose the possibility of others determining *what there is*. Bratton (2015, 46) argues that in order to understand how this control is exercised, we have to look to the earlier development of containerisation, and the way that this standardisation allows for the rapid pinging of packets back and forth, much like data. This idea of container mobility as standardised, homogenous and unfailingly efficient will be familiar, as it picks out what Martin Parker (2013) characterises as the dominant or standard account of containerisation, which perhaps finds its most popular expression in Marc Levinson's book *The Box* (2016).

Levinson sets out a history of the container as a disruptive technology, one that sped up the loading and unloading of ships and reduced freight costs by standardising the size of containers, the locks that allow them to be securely stacked and the carrier fittings that the cranes lift or lower them by – in turn paving the way for just-in-time production and distribution. Bonacich and Wilson (2008) highlight intermodality – the ability to carry the container by ship, rail or lorry without unpacking its goods – as fundamental to the logistics revolution, broadly

understood as the emergence of just-in-time, since it enabled a movement away from break-bulk, the traditional and labour-intensive mode of loading cargo piecemeal.

It is possible to understand containerisation as a form of compression, in parallel with that of data, with the container operating as a form of routed storage (see Gregson, Crang & Antonopoulos 2017, 385). But the danger is that the standardisation of the container has been overstated – supply chains are rarely all that homogeneous (see Tsing 2009) – and that compression is not fully achieved, since containers are not universally full and often travel empty, particularly where there is an imbalance of trade. Imagining a uniformity of logistics would ignore the enduring use of break-bulk, the mobility of pallets and the 'curtain-siders' (lorries) that carry them, not to mention the parcels taken on 'the last mile' to the home by fleets of vans.

That said, data come in different sizes and types and where the comparison does some work is with the question of bandwidth. Take, for example, the canals that allow shipping routes to connect oceans. Levinson (2016, 312) raises the importance of scale: the bigger the ship the lower the cost of carrying each container. This means that speed is sacrificed for capacity – Maersk Triple E class container ships carrying 18000 containers are not exactly streamlined – but the trade off, at least in the Panamax era, was that ships still had to be able to fit through the locks on the Panama Canal. Even where the canal has been bypassed in favour of the land bridge across the continental United States, there is still a limit on transmission placed by rail gauge and the regulation of road loads. Cargo mobility is further limited by the overloading of road infrastructure around distribution centres and the urban congestion encountered by vans on the last mile. As such, the signal strength of the *logistical traject* is determined by a kind of bandwidth.

*Logistical Trajectography*

Bratton (2015, 131) suggests that Amazon's integration of e-commerce and logistics initiates a 'flat world' for the smooth transmission of data and commodities. But neither *data* nor *logistical trajectographies* constitute the kind of pure surfaces of optimal mobility imagined by Virilio (2008a: 131) and riffed on by Bratton. It is estimated that 90% of the world's things travel by container ship (Birtchnell, Savitzky & Urry 2015, 1). The idea that this movement occurs across a flat surface is bound up with an imaginary of the sea as empty or devoid of meaning (see Anim-Addo, Hasty & Peters 2014, 341), a sort of chauvinism of the land. The sea is more than a surface across which commodities are made mobile and this projection of a frictionless plane – an open space for freight – hides the fact the sea is traversed according to specific shipping lanes and routes (see Gregson, Crang & Antonopoulos 2017, 389). The photography of Allan Sekula (2018) provides an example of what is missed in these hidden spaces of labour across oceans and on seafronts.

Ports might stretch and fragment national borders, as Kate Hepworth (2014, 1123) suggests, but logistical trajectories do not pull geography taut. The logistics revolution was a revolution in the organisation of economic space, a spatial fix to the problem of overproduction (see Cowen 2014; Cidell 2015; Danyluk 2018). It allowed for production – including transportation – to be enacted across space, rather than concentrated in limited sites, creating a distributed logistics space, or *logistical trajectography,* that replaced the old model of situating one warehouse by the factory and one by the market. Logistical space then became an expansive sprawl of production and storage. The container ship in turn becomes a kind of floating warehouse, and the warehouse or port an event of circulation that organises the intermodal mobility of cargo travelling by sea, rail and road.

Data certainly contribute to the aim of smoothing this all out. Beer (2016, 102) reminds us that data are 'as much a part of the very infrastructure of contemporary capitalism as lorries, vans, forklift trucks, pallets, buildings and steel toe-capped boots'. Those lorries and vans and the bodies in those boots are all orchestrated by data systems. Barcodes, RFIDs and other trackers trace the movements of commodities and workers alike, incorporating bodies as just another moving part in the logistical system (see Kanngieser 2013). More than this, the trajectories of data and cargo are routed through a composite geography: undersea data cables trace shipping lanes (Starosielski 2015); data servers share their remoteness with distribution centres (Holt & Vonderau 2015); and paths cut by rail and road are followed by data on the move to urban centres (Mattern 2017). This entangled and overlapping infrastructure facilitates the supply-chain omniscience of companies like Amazon.

But it does not flatten out space. Even trade corridors and purpose-built logistics cities come up against choke points. Just as data travelling 'long-haul' slows as it reaches high density areas like cities (see Starosielski 2015, 62), so does choreographed logistical space come unstuck when it reaches the messy and inefficient space of the post-industrial city (see Hepworth 2014, 1130). The idea of flat space flatters the logistics companies, but it is an industry vision rather than a reality. Craig Martin (2013, 1033) calls this a 'surface ideology' that elides sites of tension to give the illusion of a friction-free operation. Logistics creates friction and produces patchwork spaces that impact on each other, sometimes negatively (see Gregson, Crang & Antonopoulos 2017). Amazon might have an unrivalled cognisance of its own supply chains, one provided by its data wealth, but this is not sufficient to maximally optimise those supply chains as a whole. Amazon does not preside over a flat world; its *logistical trajectography* is a patchwork space of sites held in tension.

*Logistical Trajectivity*

Bratton (2015, 132) argues that Amazon challenges our everyday sense of place, mystifying the appearance of goods at the doorstep and shrouding logistics in opaqueness. This is precisely why the surface ideology of a flat or seamless logistical space needs to be rejected. It is the delivery mechanism for a subjective state – a *logistical trajectivity* – marked by the production of incomprehension and the consumption of awareness. It allows for the forgetting of the spaces of logistics and a dissociation of everyday life from *logistical trajectography.* This reinforces the divide between land and sea, urban and exurban, and so on, in ways that entrench commodity fetishism and that hide the logistical production of worker subjectivities.

The conditions of logistics labour then become difficult to see: exploitation of lax employment regulations under flags of convenience in the shipping industry (eg Cowen 2014); labour struggles at the ports (eg Bonacich & Wilson 2008); the anti-social temporality of air cargo handling (eg Budd & Ison 2015); precariousness in the trucking industry (eg Gregson 2017); injury and surveillance in distribution centres (eg Kanngieser 2013); and the reckless acceleration of van delivery (eg Hill 2020). Logistics does not just create spaces; it delimits actions and distorts perception. The power behind all this shifted with the logistics revolution to the retailers – and the bigger the retailer, the greater the power (see Bonacich & Wilson 2008). Retailers can exercise control over the various sites that make up the *logistical trajectography,* extracting favourable rates and dictating time-to-market, and, by extension, effectively setting worker pay and conditions. And there are few as big as Amazon.

This power also conditions consumers, for whom this whole operation – and those working environments – is largely invisible. With online retail platforms, whose habitual use causes

them to disappear from consciousness, the problem is even more acute. Under the paradigm of ubiquitous commerce, where the retail environment can be instantiated any time and any place, the act of consumption becomes unthinking – or even unconscious. This affords no consideration of the spaces that commodities move through, not least because they arrive so quickly that they barely appear to have moved through space at all. Bratton (2015, 132) suggests that they just appear at the doorstep, as if they had no origin. This evokes the 'generalized arrival' predicted by Virilio (1996, 132), whereby the speed of digital media collapses any distinction between departure and destination.

Such an evocation is problematic since it obscures the exercise of power on the body of the logistics worker, whilst delivery co-opts the consumer into the process each time they receive their order. Goods purchased via Amazon arrive at the door the next day, even the same day they are ordered. It is not clear where they have been. But there is a certain enjoyment in their arrival – and that they arrived so quickly – that interpellates us as subjects of logistical power. The combination of mystification and enjoyment is potent. Beer (2016, 190) writes of data systems as producing 'affective measures', the way that data collection and analysis is put to work to change how you feel. Amazon uses its data wealth to control the spaces of action between production and consumption in ways that make users feel good – but also not feel anything at all about those spaces, the people in them, or their orderings of agency. This is the triumph of *logistical trajectivity:* not to flatten space, but to squash any consideration of it.

**Moral Trajectory**

Although used above for expedience, the terms 'user' and 'consumer' feel ultimately inadequate. At best, they refract human experience through the prism of object mobility. At

worst, there is a linguistic complicity with the desire to treat bodies as flows of data or organic freight, as exemplified by the parallel tracing of logistics workers and containers using trackers or sensors (see Kanngieser 2013). The movement of bodies not only stands apart from these systems, it produces moral experiences that explode their seriousness.

*Moral Traject*

Anne Jensen (2011) has argued that mobility is bound up with moral experience, and Doughty and Murray (2016) that certain mobilities can be immoral. Virilio provides a nascent account of morality itself as a kind of movement (see Hill 2019), arguing that the weight of responsibility 'means that I go toward the other' (Virilio 1999, 81). Morality would then be the pull of a kind of gravity – a graveness of the human condition – that directs one towards the other person. This deepens an understanding of the way that mobility and morality are at work together, suggesting that not only do we have moral or immoral encounters as we move around, but that movement itself is fundamental to consummating any such moral encounters. In light of the trajectories outlined above, the mobilisation of an idea of a *moral traject* – of a body that is moved by others and moves towards them – provides not only a critical concept but a dynamic one. The idea it cements is that morality is not something pre-planned or orchestrated nor a moment of contemplation outside of immediate social time. Morality as such is live and on the move.

And this comes to bear on how we understand the orchestration of trajectories by platform systems such as Amazon, where moving bodies are traced by sensors to escalate and accelerate work tasks (Moore & Robinson 2016), where automated headsets dictate the orientations of workers in logistical spaces (Kanngieser 2013), and where apps plot out courses that are often haphazard and unsafe (Hill 2020). Amazon labour incorporates the worker's body and its

trajectories into the platform's machinery (see Delfanti 2021). In order to get underneath these lived and live ethical issues, it is useful to work from an understanding of moral trajectory that grounds moral encounters – experiences of responsibility and the need for care – in a way that shows them to be fundamental to the condition of a body that moves and is moved, since this would give further and firmer ground for critical analysis of these conditions of mobility. Levinas puts this at the heart of his existential phenomenology, and a turn to this work will provide a moral groundwork for future engagements with platform trajectories.

If we are to talk of a *moral traject* then, in phenomenological terms, we are talking about an "I" as a subject of a mobility that is bound up with moral existence. In *Existence and Existents* (2008a) Levinas observes that 'existence is a relationship between an existent and itself' (25), which is to say that existing is fundamentally an act of the existent and nothing else. We exist, then, in a state of solitude or hypostasis, a position of self-reference and unity that confers our power in the world. But as well as providing sovereignty it also confers loneliness and sorrow – until, that is, this hypostasis is interrupted by the movement towards the other. This is a movement towards what is absolutely outside of the individual, a departure from oneself to meet the social needs that one's own existence or solitude is insufficient to meet. Levinas (2006, 74) writes that 'the Other Person tears me away from my hypostasis, from the *here*, at the heart of being or the centre of the world in which, privileged, and in this sense primordial, I place myself'.

And yet this relationship with the other is not 'the terminus of a movement', which would be, Levinas (2008a, 29) argues, little more than 'a calm rest in oneself'. The other is not a thing that can be grasped or a destination that can be arrived at. The other is always set back from, always a step away from the "I", but this step towards, the orientation of being towards the

other as a movement itself is a foundational move in the moral relation of intersubjectivity. Or, as Levinas (2008a, xxvii) puts it, 'the relationship with the Other is a movement toward the Good'. The very condition of existing necessitates moral trajectory, that each individual is, as an existent, necessarily a *moral traject* – or else we have no social existence.

*Moral Trajectography*

In *Totality and Infinity* (2007), Levinas argues that the "I" and other do not form a unity or totality, even though their encounter forms a closed society between the two. Such an integration would make the journey towards the other a return to oneself rather than a movement away from one's own solitude, since totalising entails the containment of the other – of the world – in human thought, which is to remake the world in one's own image and without the other. But whilst the other 'is not wholly in my site' (Levinas 2007, 39), the relationship we form occupies a particular *moral trajectography*. Levinas (2007, 27) understands moral experience as 'welcoming the Other' or 'hospitality'. As such, moral existence entails a dwelling.

Dwelling in Levinas (see 2007, 152-174) stands as the condition and commencement of moral activity. The dwelling represents a relationship between inwardness and openness, interiority and exteriority, as a space that is sequestered but also an opening onto the world. We might think here of the home, which concretises our separation from others but also opens out into public space and can be opened to others. That said, the dwelling is not here intended as a specific site in the world but rather, phenomenologically, as any given site from which the individual enters a world shared and around which the world, for them, is organised. Dwellings provide spaces of what Levinas (2007, 156) calls 'recollection', periods of stillness or

tranquillity that ready us for the movement towards the other – periods of interiority that allow for a relationship with exteriority.

Whilst Levinas emphasises the stillness of the dwelling, it is important to acknowledge the mobility inherent to all of this. John Urry (2002, 257-258) has suggested that we dwell within mobilities, and Nicky Gregson (2018) shows how this plays out in the logistics industry in relation to truckers' cabs. Even the still dwelling is formed by its relationship to mobility, the ventures out and the welcomes in. Jacques Derrida explores this in his elegiac *Adieu to Emmanuel Levinas* (1999), where the moral relationship is understood as a reception, as an *invitation in*.

Dwelling is a kind of possession, an occupation that possesses a space, and openness here means giving what one possesses – to open one's home, say – because, ultimately, the very existence of its interior is predicated on that of its exterior. The *moral trajectography*, then, is a space that has been opened to allow for the movement of bodies: the movement of the "I" towards the other; and the welcoming in of the other. But its openness is foreclosed in, for example, logistical spaces where bodies are made vulnerable by the violence of logistics (Chua et al. 2018) and at the same time made invisible or ghostlike in their extension and movement (Sekula 2018).

*Moral Trajectivity*

Levinas (2006, 81) argues that attention to the other is 'the very nexus of human subjectivity'. This attention is more precisely a mode of responsibility, or, 'the taking upon oneself of the fate of the other' (Levinas 2006, 88). And this hinges on an idea of proximity, not just as closeness in space, but the way that my responsibility is for the other to the extent that the other

is always near to my considerations. It means to put oneself in the other's place, to accuse oneself of whatever misfortune might befall the other and to take care of them – to bear them. This substitution, then, this mobilisation of the self to stand not only with but for the other, is a fundamental structure of our subjectivity. This is *moral trajectivity.* Like all processes that form the subject it necessitates a limitation of freedom. Levinas (2007, 47) writes that 'I cannot disentangle myself from society with the Other'. Instead, the encounter with the other calls into question the freedom – what Levinas calls the 'spontaneity' (see 2007, 82-84) – of the "I".

But it also promotes freedom by 'arousing my goodness' (Levinas 2007, 200). In *Otherwise Than Being* (2008b) Levinas explains this through a consideration of giving. The welcome that attends to hospitality in the dwelling cannot be empty handed. Enjoyment is solitude. But giving is proximity. You have to give what you enjoy in order to give it with your heart. And in giving it is no longer a gift from the heart but of the food from your mouth or the clothes from your back or the roof above your head. This is then no longer enjoyment but responsibility. Moral trajectory, as well as being a moving towards and invitation in, is a transformation from enjoyment to responsibility – or the emergence of responsibility from a prior state of enjoyment – initiated in the direction of my spontaneity towards the needs of the other.

It is, at the same time, a substitution for the other, a prioritising of the other, where the other comes before or goes first. Levinas (2006, 91) writes: 'If there were two of us in the world, there wouldn't be any problem: it is the other who goes before me'. That is, one's own concerns are passive whereas those of the other are a call to respond to, a situation prior to any contract that would demand reciprocity. Of course, there are more than the two. This is why as well as the moral relation, of "I" and other, there is that of justice, of citizens and states. This is where

the third enters, as a limit to my responsibility and the reinstatement of a symmetry that is political but never moral. Moral encounter is experienced as a kind of traffic, the comings and goings not only of this other but of that, and another, in competing and confusing ways, often difficult to navigate, but never not morally demanding. This, then, is the state of our *moral trajectivity.*

In its ultimate form: 'To be unable to shirk; this is the I' (Levinas 2007, 245). A movement without end and a traffic without any map or system for navigation. But the platform, as a system of organising trajectories in ways that create orders of agency, intervenes in this mess and mass of movement to prioritise the agency of capital, combining data and interfaces to produce the 'cognitive injury' of unconscious consumption (Hill 2020), of the missed and unthought ways that labouring bodies move, then finally interpellates the consumer by the enjoyment of the arrival of the goods, and altogether shorts the moral encounter.

**Concluding Remarks**

The phenomenological encounter of the doorstep, the generic and unextraordinary experience of receiving an Amazon delivery at home, will help to bring together the above, providing a brief vignette of the vulnerability of moral responsibility in the context of data and logistical trajectories. In his *Open Sky* (2008b) Virilio argues that digital media will bring about a stand-still in vital mobilities, that online interactivity leads to urban inactivity, decoupling lived experience from shared proximity. Briefly, this is an argument that requires heavy caveating – not least because all manner of mobilities make the world, as we have seen, or because the city has not become as peripheral as Virilio anticipated – but if we take this argument as episodically applicable rather than systematically, then it is useful in picking out certain events of everyday

life that are marked by this diminishment of the lifeworld. One passage in particular stands out, where Virilio (2008b, 143-144) signals the 'solitary triumph of a sedentariness without a home front and without a hinterland'.

The delivery of the Amazon package illustrates the brief annulment of the home front as threshold and the withholding of hospitality as its hinterland. The delivery drivers who take our orders on the last mile to their destination, our homes, operate under stressful time constraints, stringent disciplinary regimes and precarious employment conditions (see Hill 2020). Much of this takes place in obscure spaces, geographies of action and experience that are closed to those getting the goods, and that are given a gloss of smoothness – the propaganda of logistics – where toil and tension are the reality. But at some point, the goods arrive. Someone arrives at the door with a parcel. And this fleeting encounter is latent with moral meaning that often goes unacknowledged – and that too is fleeting and dwindles.

The logistics worker arrives at the doorstep as a threshold, as a perimeter to a dwelling, a space in which an "I" not only feels at home but from which they make sense of the world, organising their orientations and recollecting the fibres of their being the better to go out into a world shared with others. In some literal sense the doorstep marks a separation between intimate space and social space, but more than this, it stands at the crossroads of hospitality and an ultimate separation, a repudiation of cohabitation and the holding of the world in common. The invitation of hospitality is not so much a welcome into a space, in some narrow sense, but a sharing of the world, a commitment to a world shared with others. It is simultaneously to let the world in and to venture into it. The logistics worker arrives at the doorstep and leaves, their leaving in time a movement according to a strict and often delirious regime of temporality. The

proximity to dwelling, with all the moral importance that stems from this, is shorted, and a moral trajectory overwhelmed by that of data and of logistics.

When the goods are on their way there is an email or an alert from an app to this effect. This arrival is anticipated and choreographed. Then another to say the order is only a few stops away. The goods arrive and the logistics worker departs. And then another email or alert, this time to say that, yes, the goods have arrived. This is a kind of habit formation that redirects attention to the interface as a product of data trajectories and away from a consideration of the labour of logistical trajectories. The confirmation email, which operates explicitly as a receipt of delivery, also plays a more insidious part, by supplanting the encounter of the doorstep, of being handed a package by a person who also labours as a logistics worker. This new habit formation then, moving the order of events (breaching) to the interface, delocalises the experience of receiving the goods. The encounter with the other and its hospitality and welcome, in the moral (and figurative) sense of these terms, is gazumped by the platform.

Data and logistics trajectories occupy the same space. Whilst it is possible to conceptually disentangle them into *data* and *logistical trajectographies,* they are parts of a composite geography formed by the coextensive mobilities of their respective *trajects* and that then shape the subject-in-motion. These *trajectivities* are constituted in different ways, but with a shared goal of facilitating the platform as an economic entity primarily concerned with extracting value by *bringing together.* Moral trajectories inhabit the same space too. But whilst data and logistics cohere, the result is often to the diminishment of moral experience as *being towards*. Keller Easterling (2016) writes of how infrastructure space is a system of power that operates outside of – but often in conjunction with – the state. Logistics cities and free ports and special economic zones stand as spaces of exemption. There are no spaces of exemption from moral

responsibility – not even the home or dwelling – and yet there is a tendency for mobility to derail moral movement or at least to so obscure the way that responsibility becomes difficult to direct.

Moral existence means resisting standardisation and authority – it resists all systematisation because to generalise is to totalise – whilst these are core components of data and logistics systems. But it remains fragile and too easily diminished. The general account of trajectory collected here ultimately reveals the conditions of what Jørgen Ole Bærenholdt (2013) calls 'governmobility' in the context of platforms: the way that mobilities are not only governed but are themselves technologies of governing. In the case of Amazon, the way that data and logistics combine to hold in tension a patchwork geography for goods to move through obscures the conditions produced by that tension. In warehouses, in ports, at sea, injurious and precarious working conditions hold, and the mobilities that connect those sites into a distributed space pollute and degrade the awareness of moral responsibility. The doorstep experience not only brings the goods home but cements the way that their arrival, and the bodies and spaces that facilitated it, is posed to appear separate from the world of our moral existence.

This article has set out to show the processes by which user/consumers experience platform capitalism in action to the detriment of moral existence. It provides a framework for how *trajects* move, how *trajectographies* facilitate that moving, and how *trajectivities* are ordered by the demands of this movement, all of this together, so that capital flows whilst morality falters. In demonstrating the viability of the typology, it was not possible to look as deeply at its mobilising case as might be desirable. A deeper engagement with the injurious practices of Amazon would be welcome, and a typology of trajectories of data and freight and bodies that labour and consume might then give conceptual shape to a more sustained or empirical

investigation. By remaining at a more conceptual level it is hoped that this typology of trajectories would also be more broadly applicable to different kinds of platforms.

Ultimately, the purpose of any such application would be to foreground the moral experience of mobility, whilst demonstrating the ways that it comes under threat when the movement of data and commodities achieve dominance in the spaces we all share. This work is offered as a framework for formulating questions about platforms with due weight given to all kinds of trajectory, which is to say, with concern first and foremost to the moral trajectory that moves us all.

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