What happened?

According to the Global Online Tutoring Market 2018 report, the compound annual growth rate of the K-12 online education market is expected to grow over 13% between 2017-2021. In China this percentage lies almost 6% higher than the global average. Key vendors in China are iTutorsGroup, TAL Education Group, New Oriental and relatively new companies such as VIPKID and 51 Talk are growing fast. These companies offer personalized tutoring in which parents can often track the proceedings of their children through a data based analysis. They recruit teachers from around the world, promising a personalized, international learning experience, and encourage curiosity, critical thinking and creativity in Chinese children.

Online tutoring makes extra-curricular classes more affordable and accessible. It is therefore not surprising that, in a culture that traditionally prioritizes academic achievements in the upbringing of their youngsters, the demand is above average. It lies in perfectly with the so-called tiger mom attitude of Chinese parents, wanting their kids to be armed with "perfect grades and working habits". Chinese companies like VIPKID anticipate this attitude, offering online classes for children even before they start elementary school. This broadens the market and gives tutoring a whole new purpose: being the best straight away. The steady demand for test preparation, increased internet access, availability of mobile services and the scarcity of good teachers of subjects such as English in places beyond the biggest cities are also drivers of the K-12 online tutoring market in China.

On June 6, FreedomLab will host a Meet Up on Fixing the Internet: Privacy and Data Beyond GDPR, you are welcome to attend.

What does this mean?

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What's next?

Partly because of financial reasons, tutors used to be hired mainly by parents whose children needed to catch up when they were behind. Because of the possibilities of online tutoring, such as easy access and lower costs, (online) tutoring is on the rise on a global scale for a few years. It is becoming more common for children to be tutored even when they are not behind. A critical remark on this development is that it can increase social inequality because it is still a service that can only be obtained by those who can afford it. Especially in developing countries, even this more affordable version of tutoring is still too expensive for many. It is therefore unclear if online tutoring will increase or decrease inequality in countries such as China and India, where decent education is not equally available to all.

Macroscope

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Welcome to the Macroscope of this week in which we inform you about mobility-as-a-service, Marx's legacy in the 21st century and the rise of midsized cities.

Chitty Chitty Bang Bang

In March this year, a self-driving car from Uber killed a pedestrian in Arizona. Reports now suggest that the incident resulted from Uber's decision to no longer let its autonomous vehicles (AVs) brake for everything that comes in their path. That is, so far, AVs had been overly cautious, resulting in uncomfortable rides and potentially dangerous situations, and in order to "grow up" they had to learn to disregard "false positives". One could thus argue that this accident is part of AVs' maturing, but for now, this and other (fatal) incidents could hamper the further development of AVs; governments may be less welcoming to trials and funding for startups may run dry.

As we have discussed before, AVs may result in much safer roads, and company-data suggests they already are safer, but some caution is warranted as their cars still operate under relatively favorable conditions (e.g. nice weather, decent roads). Moreover, even when AVs become better drivers than humans, it will be difficult to accept any failures on their part. For one, we ascribe human error to the individual(s) involved, while an AV's mishap is (rightfully) attributed to the entire fleet. Also, AVs tend to make different mistakes from humans, which seem ridiculous (and easily avoidable).

We will see new fatal incidents with AVs and these will continue to raise debate until we reach a point where we accept them as the new normal, just as we did with regular cars in the past. Such acceptance will, however, only be possible when autonomous vehicles offer a significant benefit over traditional cars. Mere time-saving for the happy few may not suffice, and, ironically, it will ultimately be safety gains that will make us give AVs the benefit of doubt.

K-12 online tutoring

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>> see next page
For several years, the concept of Mobility-as-a-Service (MaaS) has drawn widespread attention. MaaS is supposed to allow users to plan, book and pay their trips, door-to-door, across different modes and providers of transportation. Since MaaS relies on public and shared modes, it aims to do away with current ownership-based models in favor of more sustainable and possibly cheaper use-based models. Being a typical buzzword, there’s no single definition of the concept and various degrees of MaaS have been put to practice.

Our observations

- Finnish MaaS Global is possibly the only MaaS provider that actually offers the full package, from planning to payment, including a fixed-price all-you-can-travel subscription for EUR500/month (i.e. resulting in a “Netflix for mobility”). So far it has launched its Whim service in Helsinki and the West-Midlands (e.g. Birmingham) and it will soon do so in Amsterdam and Antwerp. WienMobil offers something similar (without the flat rate option) and another example is UbiGo, which will soon launch in Stockholm.

- Google Maps goes a long way when it comes to planning trips, but options for intermodal trips are limited and booking and paying are not possible yet. Other limited services are available in, for instance, Germany (Qixxit) and Italy (MyCicero).

- Younger generations are said to be less interested in owning a car (and its function as a status symbol). Scottish NaviGoGo specifically targets 16-25 year olds who are more likely to adopt MaaS and, as such, will refrain from buying a car later on in their lives. The service is co-designed with youths and is currently on trial.

- Data about public transport timetables, and sometimes real-time positioning as well, is often in the public domain and can be used by any app developer. Any MaaS system has to combine multiple such public data sources with private ones and handle complex transactions; smart middleware is a necessity. Siemens offers such a backbone for MaaS providers.

- Sharing data and access to backends between different stakeholders requires a great degree of trust. Blockchain technology may help organize data, manage data rights and execute transactions in a transparent, secure and frictionless manner.

- Car sharing, as an alternative to car ownership is growing, but its overall impact on mobility practices is fairly limited. In Germany, where car sharing is most successful in Europe, 1.5 million people make use of shared cars. In the Netherlands, car sharing in formal schemes has been stable over the last ten years, but the number of cars available through p2p sharing has grown rapidly from 2012 onwards, to some 25k cars.
Connecting the dots

Similar to other as-a-service models, Mobility-as-a-Service implies a shift from the dominant private-car based ownership model to one based on usage. It also implies a full integration of hitherto separate modes of transportation, including public transport, which has always been offered as-a-service, into a single platform. Both dimensions of the concept hinge on the (societal) ambition to get people out of their private cars and into more sustainable means of transportation. In practice, MaaS would thus enable the planning, booking and paying of any trip by any (combination of) mode(s) on a pay-per-use or flat rate basis. Trips can be optimized for speed, costs, convenience, or sustainability and will no longer require any personally owned means of transportation. While the first ideas of MaaS arose in the 1990s, the first pilots started a couple of years ago and today we only see a small number of actual MaaS schemes operating on a commercial basis.

The rather slow introduction of these systems may be surprising, given all the talk about big data and seamless integration of datasets. However, in practice, any MaaS platform has to combine disparate data sets and gain access to booking systems of a multitude of both public (or publicly funded) and private organizations, which are not all willing or able to hand over data and control over their booking systems, while losing direct contact with customers and potentially even losing customers to other modes or operators. Since most timetable data is readily available, a service like Google Maps can “easily” offer trip planning, but the real challenge is to integrate everything into a single booking and payment system.

To get MaaS off the ground, despite these barriers, it is conceivable that public pressure from, for instance, a local transport authority is needed to persuade transport operators to cooperate with a designated MaaS provider. Alternatively, relatively neutral intermediaries may build a platform on the basis of which multiple actors, e.g. transport operators, can build their own consumer-facing MaaS products.

Implications

- Different geographical contexts call for different MaaS solutions. In the dense urban context, private cars may be substituted by mass transit, taxis and bikes. In suburban and rural areas, last-mile solutions to and from transit hubs may be more important, as well as on-demand public transport.

- Whoever succeeds in developing a local, regional, or global leadership position, MaaS will occupy a key position in consumers’ lives (and on their smartphones). Since a MaaS provider knows exactly where people are going at what time, additional revenue streams are up for grabs: targeted advertising, e-commerce/grocery pick-ups, tailored content for stopovers, etc.

- A great variety of business will be affected when MaaS takes effect and they may all seek to develop a MaaS frontend of their own: public transport operators, traditional taxi and ride-hailing companies, car rental and leasing companies, car manufacturers, booking agencies and software suppliers (for planning, reserving and paying current modes of transportation).
Karl Marx was born a little over 200 years ago in Trier, Germany. After the Fall of the Berlin Wall on the other side of Germany, Marx’ teachings seemed to have become obsolete. But in the beginning of the 21st century, it appears that Marx’ philosophy and some of his economic ideas have remained relevant, and might even be revived.

Our observations

- Marx was voted the most influential philosopher of all time in a 2005 BBC Radio poll, as nearly four in ten people on earth lived under governments that claimed to be Marxist when the Berlin Wall fell.

- Marx turned Hegel’s understanding of history on its head: instead of a spiritual foundation - such as religion, art, the Absolute - regulating the course of history, history is determined by material conditions, in which material oppositions stimulate historical developments (from feudal lord versus farmer, to capitalist versus proletarian, to platform owner versus errand boy). Following this "historical materialism", Marx concluded that instead of Hegel’s Geist, money has become our God and makes the world go round.

- Capitalism has a tendency to magnify inequality, according to Marx’ analysis in *Das Kapital*, as capital increasingly concentrates in the hands of the few at the cost of the many. Those who own the means of production – capitalists – are even forced to exploit those who don’t own the means of production – proletarians – or else they will be put out of business by others who will do so.

- Marx distinguished between societies’ base- and superstructures. The base-structure consists of the material conditions and the methods and relations of production means (who owns how much of them). The superstructure is comprised of our beliefs, morals and habits, and is the ideological reflection of this base-structure. As such, a society’s consciousness always reflects a certain material division and use of tools production within the base-structure, and even legitimizes this.
Nearly 135 years after Marx’ death, history seems to have rendered his ideas and his theories on capitalism, history and philosophy obsolete. One of Marx’ biggest accomplishments in his 1867 magnum opus Das Kapital is that he derives the definition of capitalism from its own presuppositions, by showing that capitalism is the rational and logical realization of a long historical process. Furthermore, he derives the logic of capital from the systematics of this capitalist mode of production and society, thus providing a “philosophical” understanding of economics and the history of economics. Taking Marx’ economic ideas and theories as philosophical ideas on the nature of our economy and modern society still provides valuable insights and teachings. The title of the 2013 book that made Thomas Piketty a famous economist contains an explicit reference to Das Kapital: “Capital in the 21st century”. In this work, Piketty’s central claim is that the rate of return of capital has been higher than the growth rate of the real economy in the long term, and that inequality has therefore been rising structurally. And by showing that inequality is not accidental but an inherent aspect of capitalist societies, Piketty addresses a typically Marxist point. Furthermore, Marx’ analysis of the opposition between the “haves” and the “have-nots” remains as relevant as ever, especially with the return of masters and servants in our gig economy. Although some of Marx’ economic theories – i.e. the idea that labor and capital are perfect substitutes or that the capitalist organization is only a form of rent-seeking with no real value creation – have been proven wrong, Marxism remains alive and kicking for most of the world. China’s Communist Party has adopted “scientific socialism” as its official ideology by adapting it to the Chinese context (“Marxism with Chinese characteristics”). Doing so, the Party legitimizes its rule with reference to Marx’ core idea that alienation and inequality are inherent aspects of capitalist societies, and that only the communist state can lift 800 million out of extreme poverty in a few decades. Extending this idea by stating that the social stratification between those who own and those who do not own the means of production has become global and is ever-increasing for the world’s poorest, an adaptive Marxist ideology or economic model might become attractive for other developing countries. And indeed, Marxism seems to be on the rise again.

Furthermore, we are all Marxist in a philosophical sense, as few believe that history is determined by ideals or other “transcendent” motives. Instead, many do hold the “Marxist” view that the way we see and understand the world is primarily a function of our historical, socio-economic conditions. For example, that consumers in “backward” countries will become less religious when they get smartphones and middle-income economies “end their grand narratives” when they become advanced ones.

Connecting the dots

Following Marx’ thought that our socio-economic, material conditions shape our thinking, digital technology might also generate new philosophies and ideas how to regulate our societies and economies. And as Marx showed that our tools shape our thinking, the increased negative connotations of social media and smartphones, or the increased power and wealth of Big Tech, might revive interest in Marxist anthropology, sociology and philosophy.

A general misconception about Marx is that he claimed the communist state was the finalization of history. In fact, Marx claimed that states are only a temporary moment in the development of history, necessary for the privatization and equal distribution of wealth and property. As our needs and preferences are determined by our historical, material conditions, the state should abolish itself as soon as there is perfect equality, as no human being in the communist utopia would feel the necessity to own private property or exploit others. As Marx’ conception of capital as the most abstract form of material conditions has the radical tokenization of our worlds as its anti-thesis, Marxist philosophy would embrace a decentral network economy as a solution to the problem of alienation. As such, it might fit into the state ideologies of China, Singapore or Russia.
From the rise of megacities to the decline of rural areas, the future of cities seems to be clearly outlined. However, there is also an ongoing revitalization of midsized cities. Expensive housing and long commutes in the largest cities could increasingly push people towards midsized cities. Together with renewed attention for the hinterland and rising investment outside of the largest cities, these forces are transforming urbanization.

Our observations

- Between 2010 and 2015, midsized metropolitan areas in the U.S. (between 250,000 and 5,000,000 people) had more people moving into them than anywhere else in the country. Meanwhile, larger cities are seeing slower population growth and an uptick in domestic out-migration.

- In the U.S., the greatest worker shortages are outside of large cities: in suburbs, mid-sized cities and rural areas. As a result, the idea of paying people to move into communities has spread. Meanwhile, for many millennials, midsized cities are becoming their first choice.

- In the events industry, midsized cities are increasingly popular. Many events are getting priced out of large cities as rates for hotels, venues, and food increase every year.

- China’s tech giants increasingly focus on rural areas. Alibaba recently pumped $717mn into Huitongda Network, an e-commerce platform serving 15,000+ rural towns. Tencent-backed WeDoctor is making healthcare more accessible for people in smaller cities, while JD.com has entered the stage there with its delivery drones. Pinduoduo, the leading app for social e-commerce and the fastest growing app in China’s history, has a core function of ‘group-buying’. According to its founder, people from megacities like Beijing will never understand its business model.

- In The Atlantic, James Fallows argues that the U.S. is reinventing itself on a local level, away from the gaze of coastal big-city America. Faith in local government is high (while national politics induces distrust). “Reverse talent migration” is taking place as young Americans increasingly find that the overall life balance is better someplace smaller and less expensive. The balance of venture capital is shifting towards smaller cities. And smaller cities increasingly feature smaller advanced-tech workplaces.

- France is launching a $63bn plan to revamp 222 city cores over the next five years. France’s Villes Moyennes – or “average cities” – have populations between 15,000 and 100,000 and contain 23% of its population and 26% of its jobs. Minister of Territorial Cohesion Jacques Mézard said “medium-sized towns are an essential area for the development of our territories.”
Connecting the dots

Urbanization has raised living standards and created immense wealth. As the largest cities grow ever larger, they are increasingly on their way to becoming ‘megacities’ (metropolitan areas with over 10 million people), indicating a new phase in the history of urbanization. However, naturally, this phase is now revealing its limits: people are increasingly priced out of megacities or prefer life elsewhere. But the limits of megacities are only part of understanding the appeal of midsized cities. Three trends are relevant: challenges in megacities, the revenge of the hinterland, and innovation in (non-)urban areas.

First, the appeal of midsized cities is directly related to the challenges of megacities. The magnetic pull of megacities has also created problems that are nearly impossible to solve. Most important are affordable housing and congestion. Rather than being a problem for only the top cities, unaffordable housing is baked into every global city. The teachers, policemen and nurses that are being pushed out of the center of developed cities now resemble the desperate slum dwellers on the periphery of developing cities - as both are priced out of the city. Meanwhile, congestion chokes up urban roads, increasing commutes to disheartening lengths. These are wicked public policy problems, illustrated by the fact that only Tokyo (zoning deregulation for housing) and Singapore (congestion pricing) seem to have found viable solutions. Meanwhile, midsized cities provide lower cost of living, an easier commute, and a more neighborhood-oriented lifestyle which appeals to millennials.

Second, the ongoing populist wave is drawing attention to areas outside of big cities. Both journalists and politicians focus on the hinterland, and rising innovation and structural challenges of megacities, increased government investment outside of the largest cities could increasingly push people towards midsized cities, especially when mobility options improve (e.g. self-driving cars, mobility-as-a-service, public transport) for midsized cities that are well connected to megacities.

Implications

- **Mobility is an important roadblock to a larger population shift to midsized cities.** It could take a viable mobility option that enables living in midsized cities while working in nearby megacities to trigger this shift. That would create an analogy to the 20th century shift to the suburbs (then the automobile, now perhaps the self-driving car). Such a mobility option would have to allude to the idea of the travel time budget (which is exceeded by many commutes in megacities today). Meanwhile, mobile homes could increasingly become an attractive option.

- **The mounting challenges of megacities raise the question of the ideal bandwidth of city-size.** Geoffrey West shows that whenever a city doubles in size, every measure of economic activity increases by approximately 15% per capita (benefits of the megacity), but that also applies to, for instance, violent crime and traffic (suggesting limits to exponential growth). Since rural areas and small cities do not create attractive lifestyles or robust economies, the ideal city-size is the range between midsized cities and megacities (their population sizes being dependent on the domestic population distribution). Furthermore, as the spatiality of the city and government policy co-create housing and congestion, they determine the limits of exponential urban growth.