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Term Paper – Regulating Internet Edge Platforms
9 October 2023

Data Property Rights: Empowering Privacy with Economics and Ethics

Introduction

Privacy is an increasingly contentious issue in the modern age of edge platforms. Data serves as an important commodity on the Internet marketplace for the business of digital advertisers and the platforms that host them. There has been an increase in the legal protections regarding privacy and data rights across the globe with varying degrees of strength. The General Data Protection Regulation in the EU serves as to apply comprehensive rules to give its citizens basic rights with their data. Meanwhile the United States has had a much more hands-off approach to privacy legislation, delegating companies to self-regulate. There has been a push from some states to establish more privacy legislation, most notably in California. However, there has been one proposal that has not yet been implemented by any nation: data property rights. Data absolutely has proven to have value due to the existence of the entire online economy. The main players within the data economy has been platforms, advertisers, and analysts. This begs the question, why do the people play no part in this market when it is their data? They should be able to determine the worth of their data, dictate its uses, and reap the benefits of their own information. This paper seeks to analyze the idea behind data property rights and argue for the role that it should play in further progressing the issue of privacy.

Motivations for Data Property Rights

Ethical Justification for Data Property Rights -

The most fundamental aspect of any right is justifying that people deserve that right. As it stands, people virtually have no property rights regarding their data. This is not to say that people have no rights over their data. Notably, the EU's GDPR grants users various rights over their data such as the right to information, access, data portability, etc. (Olsen). There also exists many different FIPPs (Fair Information Practices and Principles) throughout history that detail how organizations should treat data. Such as the US FTC's Privacy Principles that include accountability, minimization, security, etc. (FPC). The point is that both governments and organizations recognize that people are entitled to have control over their data, which is attributable to our right to privacy as individuals. So, why not extend this control over data towards property rights?

There is arguably a chicken-and-egg problem when it comes to who owns data. An individual's personal data would not exist as it does today without platforms and websites

tracking them. On the other hand, the platforms and websites would not have this individual's personal data if this individual did not use them. Slightly untrue since Google has trackers on 75% of the websites on the Internet even if you do not use Google (Karaj et al. 9). Currently, the ownership of individual data belongs to the platforms. This status quo exists primarily due to the fact that individuals do not have a usage for their personal data whereas the platforms have many uses for it. Platforms are also the ones that have control over how the data is stored, which is a technical barrier for individual usage. The core issue here is that platforms effectively derive all of the benefits from an individual's personal data whereas the individual has to handle all of the privacy harms if such data were leaked. In a Guardian article, Tesla employees had misused photos and videos collected from car cameras purely for their own entertainment (The Observer). The fact that the existence of an individual's data relies on both the individual and the platform should mean that individuals deserve to some benefit with the privacy risks. Overall, data property rights grant individuals a much more meaningful choice than existing rights in laws like the GDPR.

Data Marketplace Economic Benefits -

It should be evident at this point that a key part of data property rights is acknowledging for people that their data holds value. That is exactly why there has been an entire economic sector that is built on personal data and personalized advertising. In particular, Google is involved in virtually every point of the process of serving some end user a personalized ad. In a WSJ article, Hagey details out the process starting with a user visiting a webpage. Then, the publisher posting an ad space to said user with their personal data to an ad exchange. Next, advertisers bid for the ad space in an auction with ads prepared for specific audiences. Finally, the exchange determines who wins the auction and the winning ad is displayed to the user all within fractions of a second. Currently, the end user is NOT actively involved at any point in this extremely lucrative process, even if it is their data. So, this shows that at least advertisers have an interest in personal data, but consumers have benefits too. According to "Economic Aspects of Personal Privacy", there are logical, economical reasons that some consumers want to hide or share information with companies. For an instance of sharing, it is beneficial for a consumer to tell a producer that they want a Jonathan apple whereas the producer has many kinds of apples like Jonathan, Macintosh, Red Delicious, etc. (Varian, "A Simple Example"). Knowing the exact preferences of a consumer allows both the consumer and the business get what they want more quickly. A data marketplace would reduce what Varian calls "search costs," which are the costs associated with a consumer having to find what they want or a business guessing what a consumer wants. This is precisely the basis for Google's personalized search. In our modern age of abundant information, Varian argues that attention is a valuable commodity and ways to economize attention is becoming more important ("Search Costs"). Thus, the exchange of

information between users and platforms can facilitate much easier transactions when dealing with products. A final important aspect of data property rights is that they address the economic externality of privacy. Varian uses the example of a person who is signed up for a mailing list has to endure the cost of annoyance by receiving junk mail whereas the seller of their mailing information ignores the cost to them ("Secondary Users of Information"). This example can easily be expanded into the territory of online advertising as just using a platform like Google search or Instagram allows users to endure the costs of seeing ads. In exchange for agreeing to have these ads, users would be compensated with data property rights and fix the economic externality. Overall, it is evident that data property rights bring many economic benefits for consumers, and this idea has historically been an economic one.

An Incentive to Care about Privacy -

Another interesting aspect of data property rights is the incentive that it provides for individuals to care about their privacy. As previously mentioned, there have been various laws and regulations passed across the globe regarding privacy. There is this notion that granting users more control over their data is the key to protecting privacy. However, all of the efforts towards granting users control over their data has not amounted to protecting more privacy. In a 2004 study, it was found that only 0.24% of 5,158 sessions had users navigate towards the privacy policy of a website, and only 6% of policies are readable by the most vulnerable 28.3% of the population (Jensen and Potts 477). The burdens that privacy policies place onto the average user is far to great for them to properly care and take action. A CMU paper suggests that the best means of protecting privacy in terms of policy is estbalishing a strong baseline of privacy protections similar to the fair information practices (Acquisti et al. 514). However, data property rights offers a new monetary incentive for people to care about how their data is used and what it is worth. Monetary incentives are a powerful drive for the average individual.

Consent is another key aspect of previous privacy laws and regulations. This is the reason why a core principle in many FIPPs require notice or awareness of data collection and the choice to opt-out. Oftentimes, people would accept the standard default privacy settings instead of actively changing their preferences. Data property rights would require more active consent to use individual data. It does depend on how it is implemented, but individuals would have to be compensated somehow if their personal data is used. In order to properly compensate someone, the individual would have to actively provide that information at some point. The details are left vague for now because implementation can take many forms, but the point is that individuals should have to actively do something to show agreement and receive compensation.

Addressing Major Criticisms

Surveillance Capitalism -

One of the most major critiques of the modern age of technology is Harvard professor Zuboff's concept of surveillance capitalism. Surveillance capitalism is a new form of capitalism that aims to predict and modify human behavior in order to achieve profit and market control (Zuboff 75). An important aspect of surveillance capitalism is the control that it festers into the everyday lives of people as people continually buy more technology.
In this same paper, Zuboff has directly addressed some of the arguments made by Varian, whose points for data property rights we discussed. First, she claims that Google has a "formal indifference" to its users, and this idea of indifference means that these platforms do not serve its users (Zuboff 79). I think an important implication in her claim is the commodification of users by these new platforms, which I will not argue against. It is evident that these platforms use its users as a means for profit rather than ends in themselves. The establishment of data property rights however would help establish users find some level of agency where they otherwise would not. I can agree on a personal level that I do not want to treat my privacy as a commodity; however, I know that my data will always try to be treated as such by others. If this is the case, then I should have a means to either end this or derive some more direct benefit from it, which data property rights do. If the commodification of data is something that will happen in this age, then it should be something that includes the people. The next major argument she brings up is the concept of the Big Other, based on the totalitarian concept of the Big Brother. This Big Other is a decentralized source of power that almost invisibily tracks people, which Varian claims is agreeable on the basis that these people receive great returns in convenience, safety, and services (Zuboff 82). This is a very reasonable argument to make that the invasion of privacy would create a future power dynamic that the common people would not be able to predict whenever they choose to sell their data with property rights. In order to adequately address this, I argue that we need a culture that embraces the value of data. A core aspect of rights are the choices they give to people, which is the choice to sell or NOT to sell their data. Proper education around the importance of privacy and personal data is crucial to ensuring that people know the full consequences of selling their data. I argue that such education and culture would not exist without establishing data property rights first. These rights are the motivations for the people to have these conversations, creating the culture, and finally education. Finally, she addresses Varian's claim that people want and expect personalization in our modern age with the fact that our relationship to platforms like Google is not based on trust. We open provide our personal information to our doctors, lawyers, and accountants because we trust that they work for our interests whereas Google treats its users with the defined "formal indifference" (Zuboff 83). The key to this argument is that platforms do not provide the benefits to users

that we are lead to believe. I think the best means of addressing this simply lies in granting users better control of the flow of their personal data. Within data property rights, individuals should choose which data they are ok with selling and set defined limits for usage. An example is if Google wants to track location to improve its maps service, then users should only give up their location and it can only be used for the duration of the study. The crux of Zuboff's theory of surveillance capitalism lies in the fact that it is an extension of the harms of capitalism. I acknowledge that data property rights do play a part in sustaining this economic system. However, I do believe that within the capitalist system that data property rights are vital to bringing economic power to the people. I accept that we need more privacy protections as well; however, privacy protections alone cannot bring the economic empowerment of data property rights.

Power Imbalance -

Another crucial criticism of data property rights is the power imbalance between platforms the users due to the information asymmetry of the value of data. The crux of the argument for data property rights has been empowering users to determine the value that their data is worth. The reality is that the average user does not understand how much their data is worth, which is the origin of many privacy issues. People have a poor understanding of privacy due to many factors. In a CMU research paper, it was found that people cannot be counted on in order to make decisions about privacy in their best interests due to the uncertainty and context-dependence of privacy (Acquisti et al. 513). Evidently enough, it is hard to justify that people are able to properly determine the best value for their data whereas edge platforms have perfected a system to profit off of personal data. In order to counter this, I argue that people are capable of determining the value of their data. The fact that they have not proven it has to deal with the fact that they have not had proper motivation to do so. As previously mentioned, one of the benefits of data property rights is the monetary incentive that it provides people. In an economic argument, there is the concept of supply and demand. Perhaps, some users start by overvaluing their data and cannot find any buyers and others undersell and see little profits. The market will eventually help users determine what prices they should have for their data. Additionally, I want to swap away from the fact that people may not determine the economically optimal value of their data to the ethical implications of this idea. Individuals deserve to determine their own worth, not any company. It does not matter whether or not their valuation is an economic optimal value for profit, it matters that it is their valuation. The online data profile consisting of an individual's activities, behaviors, and interests are fundamentally a representation of themselves on the Internet. Thus, it is tantamount for online autonomy that they dictate how this part of themselves is worth. In any case, the fact that people finally receive any form of compensation for their data is monumental to the status quo where they receive nothing.

They do not have to receive everything, simply something that they find satisfactory by their own terms is enough.

Applying Data Property Rights

After our discussion on the overall theory of data property rights, it is worth discussing how such an idea can be implemented. Implementation can take on many forms, but the commonality between them needs to be the empowerment of the individuals behind the data. They need to be allowed to understand both the value of their data and a means of compensation for others to use such data. The three implementations discussed are a governement-based approach, a market-based approach, and a regulation-based approach.

Governmental Approach -

While the theory behind data property rights has existed for a while, there has not been many politicians that have taken the idea up for their own platforms. In the 2020 US presidential election, Democratic candidate Andrew Yang had directly proposed the idea of data property rights on his campaign platform. For context of Yang's platform, he ran on his flagship idea of Universal Basic Income or UBI, which he called the Freedom Dividend. This Freedom Dividend would give every US adult a check of $1,000 per month. Yang planned to fund this proposal through a Value Added Tax of 10%. This VAT taxes the production of goods or services of a business in order to target large corporations (Yang, "Freedom Dividend"). On the topic of data property rights, Yang proposed increasing the general rights people have over their data such as being informed of collection, opt-out, being forgotten, informed of breaches, and downloading your personal data. He claims that he wants to use a VAT on digital advertisements to ensure that every person whose data is used by tech companies gets a slice of that digital ad (Yang, "Regulating Tech Firms"). As previously stated on digital advertising practices, personal data is a part of the process as ad exchanges use any information collected about a user's interests and web history in order to match the ads in their inventory to the website the user is on (Zeng). This idea would tax the usage of such data. It is not entirely clear on Yang's website whether the profits that users would get are separate or part of the Freedom Dividend that he proposed. Regardless, Yang's idea of data property rights relies on a government approach where the government is the one determining and distributing the profits that individuals deserve. This idea does have the drawback of not allowing users to control the value of their data and the profits they receive. However, this implementation is the most likely of the three to benefit the average person the most. As previously mentioned, individuals are not fully aware of how much their data is worth, and many do not have the time to determining the value or opt-in to new services. This proposal would handle these things and ensure that people are compensated, regardless of what they do. This proposal would also directly address the criticism of the power

imbalance between users and platforms. Unfortunately for this proposal, Yang did not become the next president, so this idea will remain unimplemented in this manner for the time being.

Market Approach -

Another alternative implementation of data property rights involves introducing a new type of competitor within the current data marketplace. The purpose of this competitor is to aggregate a data profile of users who sign up for it and sell this data profile directly to advertisers or other business that want it. This competitor will be referred to as a data-cooperative, although this may not necessarily need to be a cooperative in practice. Additionally, it is worth stating that this idea was inspired bya conversation with CMU professor Skirpan. The core idea behind this data-cooperative is that this data is of a far higher quality than anything that Google, Amazon, or Meta could hope to provide. First, users would have to opt-in by signing up for this service and allow pieces of their data to be tracked. They should be able to see what their data profile consists of and control what finally gets sold to third parties. They could add more data if they want to, which makes the data profile more appealing to third parties. Finally, this data-cooperative would offer users a list of the people who want their data and they can sell their profile to whoever they choose. Additionally, the users should be able to dictate the value at which their data is sold for. Logistically speaking, this data-cooperative may request a fraction of the value at which the data is sold like 10% to sustain operations. At every step of this process, users are the ones who are consenting and choosing what happens with their data. This offers a marketing advantage to this data-cooperative as an ethical source of personal data. If more privacy legislation is passed for the selling of personal data, then it would likely hurt the major edge providers like Google than this data-cooperative. Aside from the ethics benefit, the reason that a data profile from this data-cooperative is more appealing to advertisers and other parties is that users consent to creating a more accurate profile. This data-cooperative can additionally have users form and join larger groups to sell their aggregate data, which may generate more profits and allow more anonymity. This type of implementation offers a much more market-based approach, and the core idea is that competition benefits everyone. Such competitors may force the major edge platforms to consider implementing this type of service themselves, which just gives more choice to consumers on how they want their data to be sold.

Regulatory Approach -

The next implementation involves expanding the existing rights granted by many privacy laws to include ownership rights over data. Currently, many websites offer users the choices to edit cookie preferences and rights such as opting-out of data collection, accessing

data, deleting data, etc. This implementation involves the government adding the choice for users to sell their data with that platform. For instance, suppose that Facebook wants to do some A/B testing with their users. In order to do such research, Facebook needs to request data from users by sending users a form to opt-in to the study. As a part of this consent form, users must actively fill out information for how they want to be compensated. In addition, the consent form should cover basic information about the study and data collected. This example was motivated by a very similar incident years ago when Facebook did not ethically get consent from users. In an editorial expression of concern, a study conducted by Facebook had collected data without following the principles of informed consent (PNAS). On the topic of selling data to other parties, users should be notified and actively participate in the process. For instance, if a user decides to accept personalized ads, then they should be compensated for a bit of the data they gave up to see the ad. If there is an organization that requests their data, users should determine how much they want to see it for. These ideas are very similar to the previous two implementations except these actions are now directly happening on the major edge platforms. It is worth stating that these regulatory efforts should be put on the large businesses that use personal data. The California Consumer Privacy Act makes a good distinction between the business the Act applies to as for-profit business that either have a gross annual revenue of over $25 million; buy, sell, or share the personal information of 100,000 or more California residents, households, or devices; or derive 50% or more of their annual revenue from selling California residents' personal information (Bonta, Section A.5). As a final part of this proposed implementation, there needs to be defined time limits on how long data is allowed to be used for. This should be up to the user how long they want this data to be used whenever they are selling it to other parties or participating in the platform's internal research like A/B testing. This time-based contract is an important aspect of maintaining data property rights so that users can frequently become compensated for the data they continually create. It is not fair to users if they agree to give up their data to a platform once, and that platform proceeds to continually collect user data afterwards without notifying the user. Overall, this approach to data property rights allows users to play a more active role in the controlling their data on the platforms that they already use.

Conclusion

Altogether, data property rights serve as another foundational step towards empowering the average user against the power of Big Tech. It is a vastly different and more radical approach to the privacy issue than previous protection-based legislation. Data property rights inherently bring many economic benefits towards the people; however, it is also worth noting the many ethical implications that it brings along with it. There would need to be a more active form of consent for data collection, there is a monetary motivation

for individuals to learn about their data, and there would be a notion of self-determination in the worth of an individual's own identity. This paper has addressed the primary criticisms of data property rights in the form of surveillance capitalism and power imbalance. The crucial thing is that the idea of data property rights as an individual policy is a means to bridge that inequality of power in the present system. Finally, this paper discussed three means of implementing data property rights: governmental approach, market approach, and regulatory approach. They each come with distinct benefits and costs, but they overall push forward the notion that people own their own data. As the world of edge platforms becomes more invasive, there is an increasing need for any policy that forwards the power for people to assert themselves.

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