

Liability rules as competition remedies

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Abstract

This paper examines antitrust interventions regarding contentious data usages by major digital platforms. I identify a missing markets problem in tipped markets and look at whether a choice of a particular legal rule can help remedy it.

The missing markets problem arises out of the unequal bargaining relationship between digital platforms and users. Every day, entitlements over personal data are exchanged in this context. Many studies focus on transactions where a platform acquires data from users. But a second type of transaction appears to be out of the picture: transactions in which users acquire data entitlements back so that the platform does *not* make certain usages of a data set, for example to protect user privacy. Most terms and conditions of platforms do not foresee this type of transaction. In tipped markets, this is unlikely to change, although it might be highly valued by users. When such a missing markets problem has at its source the abuse of market power, then it is a candidate for an antitrust intervention.

To encourage transactions, an antitrust enforcer can choose among different remedy regimes. This paper classifies them under property rules, liability rules, and inalienability rules, according to *Calabresi & Melamed's* work.² Under *property rules*, the holder of the use rights can decide on the selling price and can veto any transaction. Under *liability rules*, the non-holder of use rights can unilaterally decide to “acquire” them but must pay a compensation which is fixed by a state organ. Under *inalienability rules*, the entitlement is distributed by a state organ to one party or to no party at all, but no transaction can take place even with a willing buyer and a willing seller.

Current antitrust policy often makes use of inalienability rules, simply prohibiting certain exercises of entitlements. This can have distributional and efficiency trade-offs, and it might not reflect consumer choices. On the contrary, liability rules could empower business and end users to evaluate individually if acquiring the data use rights in exchange for an explicit price makes sense for them. Liability rules are a middle ground between a hard duty to share data entitlements and strong private property entitlements. The price setting enables the regulator to interpolate between both extremes, favouring rather one or the other party of the transaction if that is desired. If few users decide to make use of the remedy, it provides a learning outcome for the competition agency: apparently, the use right in question is not desired or too expensive. Because the choice to execute the competition remedy is in the hand of each user, liability rules raise the legitimacy of antitrust intervention into markets. Finally, liability rule remedies are not science fiction: the technology for microtransactions over data use rights is immediately available to digital platforms.

The paper uses two case studies, the German Bundeskartellamt case against Facebook/Meta regarding certain usages of personal data (2020), and the European Commission investigation into Amazon's usage of seller data (2020). In each case, possible remedies inspired by different legal rules are compared.

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² Douglas Melamed & Guido Calabresi, *Property Rules, Liability Rules, And Inalienability: One View of the Cathedral*, 85 HARVARD LAW REVIEW 1089–1128 (1972).

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1. Introduction: The free services internet and its missing markets

The internet is full of “free” services. The so-called free services internet is highly valued by users since the early 1990’s.³ For this reason, companies like Google, Facebook, Youtube, and Twitter were initially very hesitant about the way to monetise their business. They all started out without a clear monetisation model, focusing instead on massive user adoption. In the context of strong network externalities and increasing returns, growth was the only method to keep early competitors at bay. At the same time, the user preference for the free services internet obliged companies to find ways to increase user adoption without charging them a monetary price.⁴ Once a strong userbase was established, they found their way to advertising. Through multi-sided markets, advertising allowed the platforms to keep the user side subsidized – and their services seemingly free.⁵

The absence of monetary prices on the user side does not entail the absence of any transaction between users and platforms. On the contrary, the free services internet is an immense revival of the barter economy.⁶ Entitlements are easily exchanged against other entitlements, like wool was once exchanged against milk. In the digital economy, entitlements over human attention and personal data are exchanged against the entitlement to use internet services.

The triumph of the free services internet had two consequences. First, it generated imperfect entitlement regimes of the things that internet companies monetise. Take for example human attention for adverts. Legally speaking, one cannot own someone’s attention, because attention has no property regime. But transactions over human attention take place all the time, although they are rarely stated as explicit barter transactions.⁷ Clear entitlement regimes are not needed for barter transactions that are mostly based on passive consent: *Accept all and close*. Ultimately, user attention and data are the most essential by-products of the digital economy. They are not bought with money, and yet their acquisition subsidises billion-dollar businesses.

Second, as it remains relatively opaque what the barter transactions between users and platforms consist of, entitlement conflicts arise. Can Meta merge the data users leave on Instagram with the data traces they leave on third party websites? Can Google compel users to spend more attention to their own shopping comparison service than to others? Can Google oblige Android phone manufacturers to deviate user’s mobile internet traffic (and thus attention) to the Google search engine? These questions have all received legal answers. Interestingly, they have been answered by competition agencies, and hence the answers were contingent on the market context in which each question was raised. What reunites the three questions is that they deal with unclear entitlements that users give up in exchange for free services.

Back to advertising. As social networks and search engines naturally attract the input of all kinds of information over their users, the companies found themselves in a privileged position to propose targeted advertising. For that, the companies simply needed to take possession over the

³ ERIC A. POSNER & E GLEN WEYL, *RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY* 211 (2019), <https://doi.org/10.1515/9780691196978>.

⁴ There might be a feedback loop here. The user preference for free services might be an effect of the growth model of big tech firms.

⁵ There were early advocates against advertising-based monetization, but their movement never took off: For example, Nielsen advocated for microtransactions against access to services and content on websites, like how mobile phone usage was priced before the rise of flat rates.

⁶ LUIGI ZINGALES, GUY ROLNIK & FILIPPO MARIA LANCIERI, *Stigler Committee on Digital Platforms, Final Report*, 55 (2019).

⁷ TIM WU, *THE ATTENTION MERCHANTS. THE EPIC SCRAMBLE TO GET INSIDE OUR HEADS* (2017). (Providing a detailed introduction to the monetisation of attention)

data that their users leave every day on their websites. And taking de facto possession doesn't require a clear entitlement regime. Taking possession is much more comfortable than to acquire legally recognised ownership over personal data, because personal data has a very ambiguous property regime.⁸ Barter transactions are an ideal tool for platforms to appropriate personal data and to make use of it. Property law is not needed for this. All that counts is contractual law. It is in this obscure transactional context that entitlement conflicts arise.

Another aspect of the relationship between users and major digital platforms is their respective bargaining power. When markets have tipped, i.e. when it is unlikely that a competitor dethrones the dominant platform in the short run, then individual users have little negotiation power over the terms and conditions of the free services proposed by the platform.⁹ And in the current context, platforms have good reasons to keep their terms and conditions non-negotiable. The transfer of extensive entitlements over personal data from users to the platform allows the platform to maintain the absence of monetary prices on the user side. Anything that lowers the data influx will hamper their monetisation. Additionally, anything that lowers the quality of the free service will lower user engagement, and this hampers not only monetisation, but also strengthens potential competitors. Put differently, ad-monetised platforms are also locked into the free services internet.

Users know that they give away data, but barter transactions favour an information asymmetry. The absence of nominal prices renders the value of the exchanged entitlements blurry to users. Also, they often have no knowledge about the precise data signals that are collected from them, the data analytics that are performed by the platform, and the buyers of the extracted knowledge.

This information asymmetry can be experienced as uncomfortable, so that some users decide to not use certain services. Some others continue to use the service because they simply don't care about their data or are unaware of the information asymmetry. A third group of users, and their existence is a crucial assumption of this paper, care both about their data and the service offered by the platform. They can decide not to use the service or to lose control over their data. In both cases, they are dissatisfied by the current arrangement. Users from the third group might want to engage in a monetary transaction to enjoy the service and get the guarantee that certain data practices are shut down. In short, they might want to pay a platform to protect their privacy. But in tipped markets, the likelihood of such an individual renegotiation of platform terms and conditions is very low. That is a missing markets problem.¹⁰

Competition law can frame the missing markets problem, when it exists as the result of an abuse of dominance.¹¹ And indeed, this situation can be understood as a source of inefficiency. A deadweight loss is generated as (1) some users will not use a free service because of its inflexible

⁸ Herbert Zech, *Daten als Wirtschaftsgut – Überlegungen zu einem „Recht des Datenerzeugers“*, 3 COMPUTER UND RECHT. ZEITSCHRIFT FÜR DIE PRAXIS DES RECHTS DER INFORMATIONSTECHNOLOGIEN 137–146 (2015). (Showing that clearly delineated exclusive rights over data do not exist, but that data is still object of transactions)

⁹ NICOLAS PETIT, BIG TECH AND THE DIGITAL ECONOMY. THE MOLIGOPOLY SCENARIO 81 (2020). (On the concept of market tipping).

¹⁰ JOHN BLACK, NIGAR HASHIMZADE & GARETH MYLES, A DICTIONARY OF ECONOMICS (3rd edition ed. 2009), <https://www.oxfordreference.com/view/10.1093/acref/9780199237043.001.0001/acref-9780199237043-e-1992?rskey=CMfKiS&result=1892> (last visited May 1, 2022). (Providing a definition of missing markets: “The absence of a market on which to trade a good. It is not possible to trade the full range of future and contingent commodities, and markets are missing for many externalities. Missing markets are a source of market failure: the equilibrium of a competitive economy will not be Pareto efficient if there are missing markets.”)

¹¹ Competition is not data protection law. But it polices markets so that they generate outcomes for the well-being of consumers. And as a by-product, it sometimes resolves entitlement conflicts over personal data. (The “bien-être des consommateurs” was mentioned as the very recently in the Judgment of 12 May 2022, Servizio Elettrico Nazionale SpA, C-377/20, paragraph 46).

data practices and (2) some other users engage with the service but are unsatisfied with the high level of privacy invasion. Consequently, not only the users' own utility is lowered, but also the value generation of the multi-sided platforms. Some users in the deadweight loss triangle might be willing to engage with the service if they can negotiate certain blocks of the platform terms and conditions. Similarly, giving this option to users already on the platform might increase the welfare of those who decide to pay for the protection of their privacy.

There can be several reasons for the absence of the possibility to renegotiate. One, the platform does not fear competitors who may propose a less privacy invading product because it operates in a tipped market. This would be the equivalent of monopoly pricing, expressed in the terms of low product quality, or in other words, excessive privacy invasion. Two, the platform is very much subject to fear. It is worried that proposing such a transaction could harm user engagement more than it would convince potential users from the deadweight triangle to join.¹² Three, the platform believes that there are simply no users that value their privacy higher than the services they use. The platform believes that there is no deadweight loss triangle.

The question of this paper is: Can the missing markets problem be solved by the introduction of a particular legal rule? And when the situation can be framed as a competition law case, which legal rules can be introduced?

Competition law imposes remedies. Following Calabresi & Melamed's (C&M) framework, I argue that competition remedies can either introduce property rules, liability rules, or inalienability rules. This paper compares competition remedies to the missing markets problem under the different rules. To explore how competition law can encourage transactions under missing markets, several questions should be asked. In which hands should the initial entitlement be placed? Who should be able to initiate a transaction, who should be able to veto it? Should the veto right be taken away from one party, but not from the other? And finally, should the transaction be a barter, or a monetary transaction? These questions are unusual in a competition assessment, but they help leverage the ideas of C&M to this new context. That is the goal of this paper.

The main part focuses on entitlements over personal data as the object of missing markets. The third part transposes the argument to other types of entitlements that are exchanged in online transactions, like retail data and human attention.

2. Legal rules to encourage and discourage transactions: Property, liability, inalienability

Personal data are a field for conflicts in the free services internet. The optimal number of transactions of entitlements over personal data from users to platforms is highly debated. In the grand scheme, there are two irreconcilable positions, the first one being based on economic welfare concerns, the second one on fundamental rights.

One the one side, some think that these transactions should be maximised, because they allow to generate better artificial intelligence and machine learning products.¹³ It is undeniable that the more users adopt a certain service and let their data be collected, the better the service becomes. For example, Google Maps can only predict a traffic jam if people in the traffic jam allowed Google to collect their GPS data. On the other side, some find that transactions from users to platforms

¹² Reputation is key. For example, for years Facebook made it clear on the first page that its network would remain a free service. A payable option to protect privacy might give the impression that the network is "not free anymore". But in reality, it never was.

¹³ POSNER AND WEYL, *supra* note 2 at 224. (Citing Hal Varian as the leading advocate for this argument)

should be minimised to protect privacy and other fundamental rights. It is equally undeniable that privacy is valued by humans. The level of privacy invasion of certain data practices has become a subject of public concern.¹⁴ For the Google Maps example, some may experience discomfort with the idea that all their physical movements are stored and analysed by economic entities they don't know.

I discuss a situation in which the transaction over data entitlements from users to platforms (type 1) has already taken place to a large extent. This reflects reality. The big free services platforms are massively adopted by users. That's why the inverse transaction becomes important: The flow of data entitlements from platforms back to users (type 2). In other words, type 2 transactions are those where platforms give up the data entitlements they acquired from users. Type 2 transactions are much less discussed, probably because they hardly exist. Why are type 1 transactions so frequent, whereas type 2 transactions are not? The reason is that type 2 transactions are the object of our missing markets.

To understand why the free services internet ended up with the missing markets problem, I analyse the current situation with the framework of C&M's legal rules.

2.1. Initial entitlement distribution and subsequent tradability

C&M published "*Property Rules, Liability Rules, And Inalienability: One View of the Cathedral*" in 1972. In their seminal article, they consider that the first problem that any legal system needs to settle is the problem of "entitlement". When a legal system is called to settle a conflict between several parties, it must decide which party gets the entitlement at the core of the litigation. For example, an existing entitlement conflict between Meta and its users can be summarised by the following question to the legal system: Is Meta entitled to merge and cross-analyse user data collected from Instagram and from third party websites, or should users be capable to forbid this? If the legal system gives no answer, then "whoever is stronger or shrewder will win".¹⁵

According to C&M, once society made an initial choice to distribute the entitlement to one party, the legal system faces a second problem. How can the choice be enforced? How can the entitlement of the winner of the conflict be protected? Most importantly, how can the relationship between the winner and the loser of the entitlement conflict be stabilised? Several second order questions need to be answered. They concern the tradability of the entitlement after the initial assignment. The legal system must determine if the winner can give up her entitlement and transfer it to the loser, possibly against a price. If the entitlement is made transferable, it must be decided under which conditions. Can the initial holder of the entitlement regime veto any transaction? Can the non-holder force a transaction? Who decides on the price? These questions determine the very existence and nature of markets over entitlements. If no entitlement can be exchanged, no market transactions will take place. If the holder of the entitlement can veto any transaction, there is still a possibility that no markets emerge. These questions are fundamental for the market design and the future relationship between the winner and the loser of the entitlement conflict.

C&M distinguish three 'legal rules' that combine various answers to these questions and give rise to fundamentally different market designs: Property rules, liability rules, and inalienability rules.

¹⁴ E.g., Netflix Documentary, *The Social Dilemma*, 2020 (A popular documentary with a critical stance on certain data practices in the free services internet)

¹⁵ Melamed and Calabresi, *supra* note 1 at 1090.

2.2. Property rules: Private ordering

Property rules are most favourable regime for the holder of an entitlement. If A's entitlement is protected by a property rule, then A can veto any transaction over the entitlement, and if A accepts to transact, her agreement on the price is required. This is the way how private property is protected. It is the most extensive control of a person over a thing that law can confer.

Property rules enable markets. Once the initial entitlement is assigned, the winner of the property entitlement might have good reasons to negotiate with the loser and hand over the entitlement against a price. Under property rules, the state does not intervene into the price negotiation. Also, in a competitive market, the property holder's power over the price is relative. Her pricing power decreases with an increasing intensity of competition. In a (hypothetical) perfectly competitive market, the property holder's power over the price is neutralised. She becomes a price-taker, which favours potential acquirers of the entitlement. In this hypothetical world, entitlements end up in the hands of those who value them most.

On the contrary, when the holder of the property entitlement does not fear competition from other property holders, then she exercises an extensive control over the price and has an enhanced ability to veto transactions. The results are high prices and a reduced number of transactions. But even in an only slightly less-than-perfect competitive context, the property holder has already a privileged position. Posner & Weyl call this the "monopoly problem" that according to them is inherent to the legal institution of private property.¹⁶

The appropriateness of the property rule is context dependent. If there is competition, property rules are a good method to organise the relationship between winners and losers of the initial distribution of entitlements. If competition is hampered or entirely absent, property rules lead to the privileging of the property holders. In that situation, market power discrepancies between holders and acquirers will benefit the party with the higher market power. Finally, with property rules, the state intervenes only to allocate the initial entitlement, but does not exercise influence on the price of the entitlement after on.

2.3. Liability rules: Semiprivate ordering

To encourage transactions that are not taking place otherwise, it can make sense to eliminate the entitlement holder's right to veto any transaction.¹⁷ If A's entitlement is protected by a liability rule, then she cannot veto transactions over the entitlement. Also, the price for the entitlement is not fixed by A, but by the state. Here, it is B, the non-holder of the entitlement who can decide unilaterally to acquire it; but B must pay a price to A that was set by a state organ.¹⁸

¹⁶ POSNER AND WEYL, *supra* note 2 at 38. ("Like a monopolist, the landowner can earn higher returns on the sale of her land by holding out for a generous offer (effectively withholding supply from the market) rather than selling to the first person who offers a fair price. In the meantime, the land is unused or underused. Thus, private ownership may actually hamper allocative efficiency. And this is the case not just for private ownership of land: private ownership of any asset, except homogenous commodities, may hamper allocative efficiency")

¹⁷ The classic examples are takings and tort law. A competition-related example is the imposition of a duty to deal.

¹⁸ The name "liability rules" is related to W. N. Hohfeld's notion of liability, which designates the absence of the power to change a legal relation. In Hohfeld's terms, property entitlements would be those where the holder of rights and privileges has also the power to change them or engage in a transaction. Liability entitlements would be those where the holder has rights and privileges, but not the power to change them. Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE LAW JOURNAL 45 (1913).

Usually, the price is fixed at the value it provides to the entitlement holder. But the estimation of the value can be difficult to establish, precisely because the usual instrument that determines prices is absent: Previous transactions, or in short, the market. In any case, as a voluntary transaction did not take place before the introduction of a liability rule, it is likely that at least one party will be unsatisfied with the estimated price. It is important to add that there are ways to determine prices in the absence of markets. I will come back to that point.

Liability rules are introduced when there is no bargaining possible between the parties. Before the creation of a liability rule, markets are missing. The introduction of liability rules generates markets, but they are subject to price control. This form of intervention leads to semiprivate ordering. Here, everything hinges on the technocratic estimation of the price of entitlements.

The missing markets problem of this article could be a suitable candidate for an intervention with liability rules. As discussed in the introduction, the peculiar context of the free services internet made the platforms unwilling to engage in type 2 transactions over data entitlements, although some consumers might value that. A policy approach that fosters the welfare of consumers should introduce the possibility for them to engage in such transactions.

An interesting form of liability rules is proposed by Posner & Weyl. They argue that the property rule should not exist in its current state. Instead, the price for every entitlement should be publicly evaluated by its holder. The holder would pay more taxes, the higher she estimates the price of her entitlement. Finally, anyone who would be willing to buy the entitlement at the price set by the owner could force a transaction. The owner's veto right is eliminated. These ideas might not be immediately realisable, but Posner and Weyl's form of price setting for a liability entitlement is an interesting market-based alternative to the price estimation realised by a state organ.¹⁹

2.4. Inalienability rules: Public ordering

Inalienability rules represent a strong state intervention. An entitlement protected by an inalienability rule cannot be part of a transaction, even with a willing buyer and a willing seller. The result is that the initial allocation of the entitlement remains the final one.

Inalienability rules eliminate markets. If markets emerge nonetheless, i.e. the entitlement is traded despite the prohibition, then they are known as black markets. An inalienable entitlement can be attached to one, to several, or to every person (e.g., everyone's entitlement over their own kidneys), but it can also be attached to no one (e.g., no one has the entitlement to steal someone else's kidney). When A's inalienable entitlement is destroyed by B, then the state might determine a compensation that B must pay. This situation does not amount to a voluntary transaction.

3. Legal rules applied

The ideas of the initial entitlement distribution and their subsequent tradability can enlighten the missing markets problem. The absence of type 2 transactions over data entitlements is the result of the application of an unsuitable legal rule for the context.

¹⁹ POSNER AND WEYL, *supra* note 2 at 30–79. (Proposing the so-called “common ownership self-assessed tax” on wealth. Wealth is nothing more than the accumulation of entitlements.)

3.1. Initial entitlement distribution

In the European Union, the initial entitlement over personal data has been allocated to the data subject by the General Data Protection Regulation (GDPR).²⁰ The EU legislator presents fundamental rights as the rationale for this choice.²¹ Accordingly, natural persons can deny their consent to anyone who wishes to process their personal data.²² Once the consent is given, it can be retracted at any moment. Internet users' right to veto any transaction over personal data exists *a priori*. Hence, it is the initial entitlement distribution.

From the perspective of C&M's framework, user's personal data entitlement appears to be protected by a property rule. This does not mean that a legal institution of property exists over personal data. But in practice, the property rule structures the barter transactions in the free services internet. The high amount of type 1 transactions is the result of internet users giving their consent to the data collection and processing. The low amount of type 2 transactions is the result of the terms and conditions of the platforms, which are contracts of adhesion. This choice by the platforms can have several reasons, as discussed in the introduction. But after all, it is undeniable that the major platforms have the bargaining power to impose their non-negotiable terms and conditions to users.

Now, what can an individual platform user do when the platform processes data in ways unacceptable for her? In other words, how can an individual user prevent a platform from exercising certain entitlements over data describing her, when leaving the platform is not an option?²³ One answer would be to introduce inalienability rules. Why not simply ruling out certain data practices by placing an inalienable entitlement in the hands of users?

Inalienability rules would create another missing market. If users receive inalienable entitlements over specific use cases of their data, they could not accept, even when willing to do so, to use services that would propose a barter over these entitlements. In other words, this would eliminate these services from the market. Such a strong intervention can make sense in certain extreme cases. Take for example a service that processes personal data to influence democratic processes. But in the context of most free internet services, this remedy seems excessive and should be used with moderation.

In sum, legal rules can introduce two types of missing markets. One, the absence of competition combined with property rules can impede type 2 transactions. Platforms are locked into the free services internet and need to maximise data flows. Therefore, they have no interest in giving away data entitlements they once acquired. Two, a social choice that places inalienable entitlements in the hands of users impedes type 1 transactions. Markets are eliminated to protect certain public legal goods. In both situations, missing markets are created. In the first missing market, individual user choices are overridden by single company decisions. In the second missing market, user

²⁰ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

²¹ Recital 1, Regulation (EU) 2016/679: "The protection of natural persons in relation to the processing of personal data is a fundamental right. Article 8(1) of the Charter of Fundamental Rights of the European Union (the 'Charter') and Article 16(1) of the Treaty on the Functioning of the European Union (TFEU) provide that everyone has the right to the protection of personal data concerning him or her."

²² Art. 7, Regulation (EU) 2016/679.

²³ The absence of credible competitors in the short term for a major platform is a characteristic of tipped markets. This does not mean that markets cannot un-tip. But in the context of tipped markets, consumers can either "accept all" or not use the service. And not using the service can represent high opportunity costs for the consumer's social and professional life.

choices are overridden by government decisions. The question is: Can liability rules avoid both missing markets while empowering individual users to take their own choices?

3.2. Subsequent tradability: Competition law interventions

Competition law intervenes mostly after the initial distribution of entitlements. In the EU, the GDPR substantiated the societal choice to put each natural person in control of her personal data. Competition agencies enter the scene when the initial distribution of entitlements and the legal rules that protect them lead to anti-competitive outcomes.

A competition law assessment has its own standards and methodologies. This can include the definition of relevant markets, the determination of market power, or the qualification of an abuse of a dominant position. But competition agencies do not reason in terms of fundamental rights or entitlements. The goal of this paper is to show that competition agencies play however a significant role for the design of the tradability of entitlements. This is the take-away from the case studies.

3.3. Personal data: The Bundeskartellamt v Facebook case

Facebook does not only collect and process personal data from its eponymous social network. It also collects data from its other services like Whatsapp and Instagram, and even from third party websites that have installed a Facebook API. When users browse the Facebook social network, their Facebook data profile is matched and cross-processed with their profiles from other services and third-party websites. Before the Bundeskartellamt's intervention, users could not veto this practice.

In 2019, the German Bundeskartellamt prohibited Facebook to continue the automatic profile matching.²⁴ The agency argued on the basis of a combination of competition and data protection concerns. Facebook would have abused its dominant position by giving users no choice other than to accept profile matching when using the Facebook services. The Bundeskartellamt decided on interim measures forbidding Facebook to match profiles automatically and obliging it to seek user consent for the practice. On appeal, the Düsseldorf Higher Regional Court annulled the authority's interim measures, arguing that a competition agency cannot take data protection as a fundament for its reasoning.²⁵ On appeal again, the Bundesgerichtshof however validated the Bundeskartellamt's interim measures.²⁶ The decision on the merits is pending at the Düsseldorf Higher Regional Court, which send a request for a preliminary ruling to the European Court of Justice in 2021.²⁷ No ruling has been handed so far. Finally, the proposal for a Digital Services Act contains a provision that foresees a prohibition of profile matching without the user's consent, very much in the spirit of the German decision.²⁸

²⁴ Bundeskartellamt, Decision B6-22/16 from 6 February 2019.

²⁵ Düsseldorf Higher Regional Court, Beschluss VI-Kart 1/19 (V), Facebook v Bundeskartellamt, 2019.

²⁶ Bundesgerichtshof. Beschluss des Kartellsenats vom 23.6.2020—KVR 69/19, 2020.

²⁷ Düsseldorf Higher Regional Court, Beschluss Kart 2/19 (V).

²⁸ Art 5(a), Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), COM/2020/842 final ("a gatekeeper shall: [...] refrain from combining personal data sourced from these core platform services with personal data from any other services offered by the gatekeeper or with personal data from third-party services, and from signing in end users to other services of the gatekeeper in order to combine personal data, unless the end user has been presented with the specific choice and provided consent in the sense of Regulation (EU) 2016/679.")

Which legal rules are in play here? As already said, the status quo is determined by the GDPR. Users who access Facebook enter a type 1 transaction. They give their consent to Facebook's extensive data practices. The type 1 transaction happens under a property rule. Now, assuming like the agency did, that there is weak competition on the markets on which Facebook is active (I do not question this assessment here, for the sake of simplicity), the subsequent tradability of the entitlements is hampered. Type 2 transactions, effectively taking away from Facebook the entitlement to match profiles, do not take place.

Therefore, the introduction of a property rule-inspired competition remedy would make no sense. The property rule is already in place and leads to missing markets. An inalienability rule-inspired remedy could be a potential solution, although hardly arguable in the context of a competition law assessment. It would bluntly prohibit Facebook from matching profiles, or in other words, prohibit Facebook to acquire from users the entitlement to do so. Users would receive the entitlement to not have their profiles matched, but they could not transact over it.

A liability rule-inspired remedy is more flexible. The entitlement to match profiles is placed in the hands of Facebook, so that it keeps its ability to match profiles, until a user initiates a type 2 transaction and takes back her entitlement against a price. Facebook could not veto the transaction, but would receive a compensation from the user.

The price for this transaction could be determined at the value that an individual profile matching brings to Facebook. In that way, at least from a preliminary perspective, strong market distortions could be avoided.²⁹ This value of matching profiles almost certainly has been determined by the firm when it decided to engage in that practice. A competition agency could estimate it with the cooperation of the firm. A first approximation can be derived from the "average revenue per user" (ARPU) which is published in the company's SEC 10-K reports. For 2021, Meta states that it derived 40,96 USD from the average user.³⁰ However, this includes all the entitlements that users give away when using the services, so the value of the specific entitlement to match profiles might be considerably lower.

The Bundeskartellamt chose a particular liability remedy. It opted for a liability rule combined with a zero price. The agency obliged Facebook to give users the choice to refuse profile matching, but without paying a price for it. Essentially, it modified the property entitlement in the hands of Facebook into a liability entitlement. The remedy is very advantageous for the users, as it makes type 2 transactions possible without paying a price. For Facebook however, monetisation is hampered, as ad-targeting without profile matching will become less precise. This remedy changes an aspect of its business model and is therefore a quite heavy competition intervention. A positive monetary price for the liability entitlement might have prevented that.³¹

The following two sections deals with two further objects of online bartering transactions. The missing markets problem and the choice of legal rules can enlighten the conflicts over retail data on marketplaces and over human attention.

²⁹ A much more detailed economic analysis is necessary to determine the method of estimation and the economic impact of such "neutral" prices. One problem could be the negative impact of network externalities on the monetization and service quality when a significant number of users decide to take back their entitlements.

³⁰ Meta, SEC 10-K report for 2021, p. 59.

³¹ Without doubt, certain business models should simply be eliminated from the face of earth. But it is questionable if competition law enforcement is the right tool to express the societal choice to do so.

3.4. Retail data: The European Commission's Amazon seller data case

In November 2020, the European Commission sent a statement of objections to Amazon regarding certain data practices. For the context, Amazon has a dual role. It provides a marketplace, where independent retailers can sell their products to consumers. But it also sells products as a retailer on the marketplace, competing with independent retailers on that same marketplace. Allegedly, Amazon collected various non-public types of data from independent retailers to benefit its own retail business. These data included the number of sold products, the sellers' revenues on the marketplace, the number of visits to sellers' offers, data on shipping, on seller performance, and on consumer claims and activated guarantees. The retail data gave Amazon a preferential position. For example, Amazon could extract knowledge from real transactions over the performance of certain products and product characteristics. This knowledge could then influence the decisions of its own retail business.

No decision has been rendered yet, but the entitlement conflict can be analysed with legal rules. Can Amazon impose to retailers these data practices when they chose to sell products on the marketplace? If it is assumed that independent retailers have initial control over their data and performed a type 1 transaction when accepting the terms and conditions of the marketplace. Type 2 transactions are not taking place.

Independent retailers can be harmed by Amazon's data practice. For example, it may happen that the R&D costs for a particularly well performing product might not be recouped because Amazon becomes aware of its success and copies its features, if it is insufficiently protected by intellectual property. As Amazon has access to much more data than traditional resellers, it might, due to its scale, be able to identify successful products that are insufficiently protected. Also, retail data might also be used in real-time to outbid independent resellers. That means, most firms have an interest in preventing those data practices. But type 2 transactions don't take place because Amazon can impose its practices. Leaving the marketplace is often not an option in the short term, especially for smaller businesses. Therefore, to increase the flow of entitlements from Amazon to independent retailers, a liability rule-inspired remedy can be imagined.

In the context of retail data, a liability entitlement could be placed in the hands of Amazon. That means, a retailer can force Amazon to stop making use of its retail data against a price. The price of the entitlement is set at the value it provides to Amazon. To encourage independent retailers to create innovative products, they gain the possibility to acquire the entitlement over their retail data. When they are engaged into costly innovation, it will make sense for them to buy the entitlement. In that case, the retailers' incentives to innovate persist because they are protected from Amazon's free riding of their R&D costs. But when a retailer doesn't engage in expensive innovation, then it can decide to leave its retail data in the hands of Amazon. Amazon can then combine all available retailer data and innovate on behalf of those who were not capable of doing it on their own. The data of these retailers has a value, but individual retailers could not leverage it.

The DMA proposal foresees an inalienability rule for this situation.³² This might create a missing market as discussed above. Some retailers might be happy to leave their entitlement on retail data to Amazon, which can leverage it because of its scale. Also, it is important to note that retailers cannot use the marketplace for free but pay transaction fees. Still, in the provision of the DMA proposal, the spirit of the free services internet is present.

³² Digital Markets Act proposal, Art 6 (1): "a gatekeeper shall: (a) refrain from using, in competition with business users, any data not publicly available, which is generated through activities by those business users, including by the end users of these business users, of its core platform services or provided by those business users of its core platform services or by the end users of these business users;"

3.5. Human attention and other objects of online bartering

Personal and retail data are the most promising candidates for the introduction of liability rules. But there are many more objects of online bartering. Human attention is attracted, deviated, and monetised in exchange for the entitlement to use free services.³³ User traffic flows are diverted to certain websites instead of flowing naturally in exchange for the entitlement to use free services.³⁴ Users accept to consume content in which the line between authenticity and advertisement becomes blurry, in exchange for the entitlement to enjoy the content for free.³⁵

When these barter transactions happen in tipped markets, introducing liability rules could not only make the price of these services more obvious, but also give consumers more choice. Liability rules could empower consumers to decide whether they want to pay for services in monetary or in other forms.

4. Advantages and limits of liability rules

Liability rule-inspired competition remedies have several advantages and downsides. The most immediate advantage is that these remedies are executed in a very granular fashion through individual consumer decisions. The traditional problem with behavioural remedies is the high implementation and monitoring cost. Here, the implementation cost is incurred once by the platform when the transaction technology is activated. There are few monitoring costs for the competition agency once users are enabled to enter a transaction. On the side of the platforms, they already dispose of technology for micro-payments.

The intensity of the impact of the remedy depends on how many users decide to pay a monetary price in return for certain entitlements. Consequently, liability remedies can be partially executed, according to the number of users who take advantage of them. This kind of sensitivity towards user choices is usually not reached by usual competition remedies. Most often, a competition remedy simply prohibits a certain behaviour, or put differently, the exercise of certain entitlements.

If none or only few users make use of the remedy and engage in a type 2 transaction, then this can have several reasons. One, the design of the transaction can be done poorly so that the transaction costs are simply too high for the value that is exchanged. This can happen when the transaction value is very low.³⁶ Two, the price for the entitlement was set too high. Three, the entitlement is simply not desired by the users. In any case, when confronted with low adoption, liability rules yield a learning outcome for the competition agency. It might be that the agency thought that users would value the entitlement more than they actually do. In that situation, agencies can better understand what the appropriate price would be, and thus how much consumers value certain entitlements. If the adoption is extremely low, agencies can find out whether users value a certain entitlement at all. In any case, finding the reason for low adoption is an important forensic activity that must be carried out. It could prove very beneficial for the agency's future enforcement.

³³ This is advertising.

³⁴ This happens, for example, when ranking algorithms put certain results higher in the list, not because they are more relevant for the user, but because the owner of the result paid for it.

³⁵ This is social influencing.

³⁶ As a general example, some websites in France ask users to pay less than one euro per year if they wish that the website does not make use of their internet cookies. Here, the payment itself probably imposes a higher burden to many users than the value they would derive from the transaction.

The principal disadvantage of liability rules is the estimation of the price of the entitlement. Above, I discussed ways to approach the estimation. Hesitant agencies might bear in mind that in the case of liability rules, the setting of an explicit price *generates* markets in situations in which they were *missing*. Also, it is preferable to use liability rules only in tipped markets. In this context, the dominant platform has overcome the monetisation challenge, and there is little concern towards perverse incentives for innovation or growth.

On the user side, an interesting aspect is that the barter objects seem to be produced no matter what. In the common understanding, there is no problem of scarcity of data signals, traffic flows, or human attention. The problem is that sometimes, entitlements over these objects are siloed. However, I would welcome an economic study that explores how the production of these bartering objects by users might react to a specific entitlement distribution. Maybe the existence of property rules is not perfect in all situations. In other words, could the transformation of property into liability entitlements increase the user production of bartering objects? Could it be that the possibility to get back entitlements over their data and attention might encourage some users to engage more with the services?

5. Conclusion

The development of the free-services internet is not set in stone. Context-specific entitlement distribution can lead to a more sustainable user-platform relationship. C&M's framework of property, liability and inalienability rules can not only inspire the assessment of the status quo, but also the design of competition remedies.

Competition law could benefit from a reflection about the tradability of the entitlements that it distributes and modifies. Property rules lead to the favouring of the holder of market power when competition is weak. Inalienability rules eliminate markets. Liability rules can generate transactions when markets were missing.

Liability rules-inspired remedies operate under a double context dependency. First, the introduction of liability rules depends on the market context. They mostly make sense in tipped markets. Second, once instituted, their effective execution depends on individual consumer choices. With liability rules, users are empowered to consider their own situation, and to make their own context-dependent choice.

Free services have a price. They can be paid for with money. They can also be paid for with privacy loss, a cluttered internet experience, and other kinds of negative externalities. Competition law can give consumers the choice, without forcing them, to transform some negative externalities of the free services internet from non-monetary into monetary nature.