Hey Google/Siri/Alexa, of all the products and services in the Metaverse whose do you prefer?
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By Chris Pike

The Metaverse, voice assistants, smart automated vehicles, wearables, there are a number of visions of the future, but more important than which, if any, of these comes to pass, is what these different visions of the future have in common. Which is the understanding that controlling what is, in effect, the next-generation operating system, will deliver an incredibly powerful gatekeeper role that will allow the extraction of huge rents. There is particular scope for harm to potential competition from self-preferencing by these gatekeepers. This short paper sets out the exclusionary concerns and distinguishes those from exploitative concerns that I argue may nevertheless distort and restrict competition by creating a hold-up problem. I explore how these concerns might apply in the Metaverse and other emerging technologies, and argue that applying the type of self-preferencing and interoperability rules that are currently under consideration to these emerging markets will protect potential competition, provide helpful certainty for investors, and help to build an innovative but more decentralized next generation of technologies.
I. TACKLING HARM TO POTENTIAL COMPETITION FROM SELF-PREFERENCING - NEXT GENERATION GATEKEEPERS

A group of teenage boys take a break from their board game (…Dungeons and Dragons? Risk? Monopoly?) to argue about what the future will look like…none has seen Back to the Future so hoverboards do not feature…

- Ready Player One…Mark is a video-game fan and believes that in the future we will no longer look at the internet, we’ll be in it. Inhabitants of this metaverse will no longer worry about the amount of time that they and their children spend looking at, and scrolling on their phones, instead they will complain about the manipulative tricks used to lure them into putting on their glasses to enter this second life.

- Meanwhile, Jeff’s older sister let him watch Joaquin Phoenix in Her, so he’s putting his money on us all wanting our own digital butler (that we may or may not fall in love with).

- Tim’s a James Bond fan and a sucker for a gadget-packed watch, he’s betting on wearables.

- Finally, Sunder is a fan of David Hasselhoff and Kitt in Knight Rider and sees us driving, or being driven, by our own smart car (a digital chauffeur).

Now, more important than which, if any, of these comes to pass, is what these different visions of the future have in common. Which is the understanding that controlling what is, in effect, the next-generation operating system, will deliver an incredibly powerful gatekeeper role that will allow the extraction of huge rents.

Just as iOS and Android in mobile OS (and their app stores), Windows in desktop OS, and indeed Google in search, and Amazon in digital retail, Mark Zuckerberg seems to see the metaverse as a chance to become a gatekeeper to a marketplace platform (and to combine that with Facebook’s unmatched appetite and ability to deliver manipulative addiction-building innovation). He appears to see this as a step up from simply being a gatekeeper to our attention, and hence reliant on the aforementioned manipulative addiction-building innovation which looks increasingly vulnerable to regulation.

He’s not the only one either, Tim Sweeney, CEO of Epic Games, believes the metaverse will prevail and that “This Metaverse is going to be far more pervasive and powerful than anything else. If one central company gains control of this, they will become more powerful than any government and be a god on Earth.” But whether it is the metaverse, or a digital butler, or the digital chauffeur, or something else entirely, it is the prospect of centralized control that should worry us.2

At the same time these competing visions of the future will no doubt excite those eager to identify competition between big tech firms. These will hold them aloft as some sort of smoking gun to demonstrate the supposedly overzealous nature of competition agencies and the irrational panic of concerned citizens who have witnessed the exploitation unleashed in the name of incentivizing innovation over the last 20 years.

In deriding these legitimate concerns as populist excess, these characters have sought to identify themselves as undervalued and ignored experts, driven by purist scientific economic insight, rather than acknowledge their success with judiciaries around the world. However, despite their focus on innovation, there is a lack of any clear idea on the counterfactual innovation that would have been built upon the same publicly funded research by firms facing more serious competitive constraints within their own dominant markets.3 Moreover, open-ended competition-for-the-market is, by its very nature, a pale flicker of a healthy marketplace.4 It is the residual, it is what is left when within-the-market competition is for some reason absent, which is why it is accepted and justified only by the inexistence of that market in a more competitive counterfactual. Its use therefore relies heavily on the much-abused concept of destructive competition, the favored rationale of rent-seeking lobbyists all around the world.

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2 Which in large part explains the appeal of decentralized blockchains as an alternative vision for the future of the internet – though sometimes ripe for exploitation themselves (see the class action against Tether, Case No. 19 Civ. 9236, though notably Tether is not decentralised, a fact that in part explains how it was able to abuse its position), and still environmentally toxic, the possibility they offer of removing the gatekeeper altogether rather than simply taming its excesses, or occasionally changing its identity, makes them the truly revolutionary possibility here (see Pike & Carovano, forthcoming in Algorithmic Antitrust, 2022, Springer), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3680600.


So, the power of the gatekeepers to the metaverse, or over our digital butlers/chauffeurs should be a concern that agencies and policymakers can see coming. Furthermore, there is little reassurance to be had from there being competing visions for this next generation of OSs. Left alone, this amounts to a battle over who gets to exploit us, and more importantly a battle in which the race to build network effects, rather than a better value offer, will determine the winner. Indeed, these effects are likely again to ensure there are only a few winners, even if there are multiple innovations (including those where gatekeeper power is decentralized), and hence a variety of counterfactual innovations. In this context, agencies should be in a position to anticipate and forestall the tipping of these markets through the types of *ex ante* regulatory measures that are proposed in the DMA (and by the UK’s DMU). A clear steer that these rules will apply within these emerging markets will therefore be important for protecting potential competition in these markets.

## II. DISCRIMINATORY ABUSE: SELF-PREFERENCING BY MONOPSONIST GATEKEEPERS

This short paper focuses on two of the leading inconvenient economic concepts: potential competition and monopsony, and particularly the discriminatory abuse of monopsony market power by a platform via self-preferencing or other manipulation.

Potential competition is defined by the OECD as a competitive constraint on a firm’s behavior that might potentially arise but has not yet done so. For example, the potential competitive constraints from firms that do not yet exist; or from firms that do exist, but which have products that do not, or products with still unspecified features that will affect the degree of substitutability with existing products; or with products that exist but which they have not decided how to monetize.

Those that mistake economics for econometrics often seek to exclude analysis of theories of potential competition as somehow un-economic in nature, and hence inadequate or unworthy of treatment under a "more economic" competition law. As noted however, this simply illustrates a convenient misunderstanding of economic insight.

Similarly, monopsony is another area in which competition policy has developed a blind spot on the scope for harm. A key part of this reawakening has been the renewed focus upon dominant platforms that use their gatekeeper position to self-preference or otherwise discriminate against or between sellers (of products or labor). This discrimination constitutes a prime example of the way in which a dominant platform can abuse monopsony market power in either an exclusionary, or exploitative fashion.

## III. EXCLUSIONARY EFFECTS OF SELF-PREFERENCING AND OTHER DISCRIMINATION

### A. Exclusion of Rivals in Ancillary Markets

The first is the foreclosure of rivals in ancillary markets. For example, as the Italian competition agency, the AGCM recently identified, Amazon’s discriminating between third-party sellers on the basis of their purchasing of fulfillment services effectively coerces (and hence ties) those sellers into also purchasing Amazon’s fulfillment services, rather than a rival’s fulfillment services.

This type of conduct can allow a platform to use its dominance to exclude rivals in the ancillary market, and thereby to charge supra-competitive prices to sellers that use its platform. In addition, the conduct can divert sales away from sellers that do not purchase the ancillary services. Furthermore, the conduct can harm consumers. This is firstly because the discrimination can lead them to purchase higher-priced poorer-quality products that have been promoted above better value alternatives. Secondly, to the extent that the purchasers of over-priced ancillary services pass-on this increase this will increase their prices (which benefit from discriminatory prominence) and reduce price competition between sellers on the platform.

But why would a platform tie ancillary services rather than simply charging higher transaction fees? Firstly, the ability to set su-

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6 Some draw a comparison here to supermarkets that self-preference their white-label products. However, leaving aside that supermarkets tend not to preference these products (indeed some allow category captains to organize their layout), this comparison does not hold-up. Firstly, most supermarkets lack a dominant gatekeeper role since they face rival supermarkets. Secondly, white-label products are typically used to countervail the often-dominant position of major brands or to fill an otherwise vacant slot (that of the ultra-low-cost no-frills product variant, or indeed to provide a reliable quality assuring brand where otherwise there would be none). Filling these slots is therefore important for maintaining a supermarket’s competitive offer to consumers.
pra-competitive prices on these services can facilitate better price discrimination. For example, it can enable the platform to effectively set different fees for different types of sellers. It may also protect the platform from non-price competition from rivals in the ancillary market. Finally, building market power and economies of scale in the ancillary market can help the platform to then deny sellers on other platforms access to ancillary services with the same economies of scale that it has. This can protect the platform’s dominance in its core platform market.

B. Exclusion of Sellers of Products Sold via the Platform

A second concern is over the impact on competition in the markets for products sold on the platform. Where self-preferencing raises the costs of rivals, by discriminating against them and requiring them to spend more on obtaining prominence for their products (customer acquisition), this can reduce the competitive constraint on the platform’s own offering.7 Similarly where self-preferencing effectively ties products to the platform this can again reduce the competitive constraint on the platform subsidiary’s offering.8 In both cases the reduction in competitive pressure provides scope for the platform’s subsidiary to raise its own price or deteriorate its own quality without losing sales. As in ancillary markets this can in strategically important products, help defend the platform’s position.

C. Exclusion of Rival Platforms

Indeed, as noted, exclusion in either ancillary or on-platform product markets can help to exclude rival platforms (e.g. eBay, Fire OS, or Bing). For example, self-preferencing that denies independent firms in on-platform or ancillary markets access to economies of scale or network effects can deny potential rival platforms access to competitive sellers and thereby damage the value of the platform they offer to sellers and consumers. This allow the platform to maintain supra-competitive commissions on platform transactions, some of which will be paid by seller-customers of the platform, and some will be passed on to final consumers.

IV. EXPLOITATIVE EFFECTS OF SELF-PREFERENCING AND OTHER DISCRIMINATION

A. Exploitative Abuse

Distinct from the potential exclusionary effects, self-preferencing also raises concern as a potentially exploitative abuse of dominance. While not an offence in the US, this is a concern in Europe and most other jurisdictions around the world.

These concerns stem from a recognition that whatever its source (merger, exclusionary conduct, or organic growth), persistent market power can be exploited in ways that harm a platform’s customers (whether they be consumers buying products/services, or producers/workers buying distribution or intermediation).9

For example, a platform might abuse its dominance and the lack of competitive constraints it faces by setting excessive prices (commissions), or instead it might use that freedom from competitive constraints to instead discriminate and earn a supra-competitive market rent in a different way. For example, by earning that same profit in other markets, or by satisfying its non-economic preferences. Indeed, this rent might even be Bork’s single monopoly profit, and so of no additional concern, in and of itself. However, it should be recognized that earning that same profit in those other markets by discriminating can create additional harmful competitive distortions.10

9 Of course, these same consumers stand to benefit from any additional innovation by the dominant firm that is incentivized by the firm being entitled to persistent rather than temporary monopoly profits in the future. However, absent a counterfactual on the innovation incentivized by a temporary monopoly profit it is hard to measure that benefit. One approach is to assume that no counterfactual innovation would have occurred, either by the dominant firm or a rival. This will depend on the facts of the case.
**B. It’s a Hold-up!**

One of the competitive distortions caused by exploitative discrimination (that is, discrimination that does not exclude for the purpose of increasing the platform’s own profit, but simply reallocates and diversifies that profit), is that it can nevertheless distort and restrict competition by introducing a hold-up problem that damages potential competition by deterring entry, innovation, and investment.11

For example, when a dominant gatekeeper discriminates and favors its own products (or those of firms that buy its other services), a new entrant into those markets can anticipate that the returns on investing or innovating will prove short-lived. This is because of their vulnerability, not only to entry by more innovative and efficient rivals (to which innovation is always vulnerable), but also to an inferior less efficient rival product (either by the gatekeeper itself, or by a rival that pays a tax to the gatekeeper by purchasing other ancillary services).

To be clear, this is not the distinct risk of a monopoly position being leveraged (which is notionally addressed by exclusionary conduct rules). It is an additional vulnerability to hold-up where the motive is the desire to exploit the same rent across different markets or perhaps in non-financial forms. For example, to exploit in order to satisfy an economically irrational national preference (see Aéroports de Paris, in which a formerly nationalized subsidiary was favored due to its historic links to the dominant SOE gatekeeper); or a potentially rational regulatory strategy of concealing/obscuring excess profits by distributing them across the corporation; or a strategy to build lobbying power and political influence by producing sub-standard (e.g. unmoderated) products that are helpful in controlling or favoring useful politicians (instead of simply extracting profits by charging higher prices).

In effect, this type of conduct defies classification as purely exclusionary or exploitative. It is a new and different class of harm that is exploitative (and non-exclusionary) in its motive, but exclusionary in its effect. The different nature of this harm requires adapting our tools to recognize that exclusionary effects might flow from conduct with no exclusionary motive. For one thing, this again calls into question the usefulness of the single monopoly profit theory (since the effect on competition occurs despite their being no additional monopoly profit available). However, it may also cast doubt on things like the recoupment test for predation, since the effectiveness of that test rests on what it tells us about the anticompetitive motive for the conduct, not what it says about the anticompetitive effect.

The loss of the potential competition that is generated by held-up entry and by the investment and innovation that is held-up by this exploitative conduct can harm consumers. They can also harm workers and small sellers to the monopsonist (both competitors to the subsidiary who can expect no protection from competition law, and customers of the platform, who should be able to expect protection, even if they are supply-side customers).

We would usually expect the threat of entry, even by a gatekeeper, to intensify existing competition since it introduces an additional credible constraint on incumbents.12 However, the impact on potential competition is different, because unlike existing rivals who may recognize their costs are sunk, potential rivals can be expected to anticipate such risks and abandon or pre-emptively abort entry and innovation in those markets. This means the harm here will tend to be specific to potential competition, rather than actual competition.

**V. HARM TO POTENTIAL COMPETITION IN THE METAVERSE AND BEYOND**

**A. Masters of the Metaverse**

How might these concerns apply within the Metaverse? Worryingly we can see many of the familiar gatekeeper-building playbook moves are currently being deployed. In particular, there is the same push to quickly build scale and network effects, both on the user side and the seller-side of the platform in order to obtain control of the rule-making gatekeeper role.

For example, it appears that Facebook is currently busy selling its Oculus Quest 2 headsets some way below cost, offering discounts of $500 on the version offered to businesses that comes without the same requirement to hold a Facebook account. Reports suggest this is helping it pick up more than 75 percent of new VR headset sales.13 While these discounts obviously benefit early adopters that do not mind handing over

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11 For these reasons codes of conduct have been introduced by a number of countries to combat hold-up in the supply chains of dominant grocery retailers.

12 Though we note for example that Wen & Zhu (2019) find that the mere threat of entry by a dominant platform owner into an application market is sufficient to cause the incumbent application providers to reduce innovation efforts and price competition – specifically by raising prices. See https://onlinelibrary.wiley.com/doi/10.1002/smj.3031.

their data, the dominant position that they threaten to build, combined with a lack of interoperability, risk distorting competition for later adopters and developers.

On the developer side this presents the opportunity for Facebook to demand exclusivity from developers, and to copy, kill or acquire their more innovative products. For instance, the firm is rapidly acquiring developers, providing it with the subsidiaries to whom it will be able to drive business by discriminating against third parties (while Microsoft’s acquisition of Activision seems likely to be intended to do the same for them). Indeed, reports have already emerged of innovative developers seeing their products first copied by Facebook, and then thrown out of its store.

On the consumer-side, Facebook has once again removed privacy choices for users, leaving just the same take-it-or-leave-it offer that has served it so well in exploiting its dominance over social networks. Inevitably it is levying the magical 30 percent commission, the frequency of which now appears to be a convenient focal point for platforms across the sector to coordinate upon.

And when we put on our Oculus headsets to enter the Metaverse, whose products and services will be most prominent? What will the defaults be? Do we need to wait and see whether Facebook favor their own brands, or those that pay them a tax to purchase related services? Is the risk of a dominant gatekeeper emerging not predictable? Should we not take the opportunity to identify the scope for harm, and to clarify for Facebook and others the responsibilities that we expect of anyone that controls the gate to this metaverse? That way they can decide whether to invest in developing a gatekeeper-based system or an interoperable version. And if it turns out that a metaverse can only be realized by a single dominant gatekeeper, then we should ask ourselves whether it is worth having at all.

**B. The Anti-Monopolists Strike Back**

Fortunately, the FTC under new leadership is looking into the acquisitions, and perhaps unsurprisingly is also reportedly digging into the below cost pricing that will be ringing the same alarm bells that Lina Khan herself rang in the case of Amazon. Investigators will also no doubt be aware of the risk that recoupment is not something that may or may happen further down the line, but instead might be happening right now, in parallel, via exploitation of developers.

In addition, Commissioner Vestager has highlighted these concerns, and the European parliament has identified the importance of including far-reaching and non-discriminatory interoperability requirements in its Digital Markets Act. In particular, it has asked for these to extend to social networks and messaging applications. These requirements offer a powerful tool that removes the scope for hold-up, and hence incentivize the innovation, investment, and entry that risks being forestalled if a dominant platform is once again permitted to take control of gatekeeping. With luck they will be applied to the Metaverse before Facebook’s position becomes more difficult to rein-in. Indeed, the more far-sighted legislators might even want to anticipate the need to foster interoperability with the type of decentralized alternatives that are starting to appear in social networks.

**C. Digital Butlers & Chauffeurs**

Meanwhile concerns over self-preferencing and discrimination in emerging digital assistant technologies are further advanced. In January, the European Commission completed a sector inquiry into digital assistants, which flagged the risks from the emergence of gatekeepers. They are

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14 See CNBC, Microsoft’s metaverse plans are getting clearer with its $68.7 billion Activision acquisition, available at https://www.cnbc.com/2022/01/19/microsoft-activision-what-satya-nadella-has-said-about-the-metaverse.html.

15 See the ongoing Bundeskartellamt investigation: details (in English) available at https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2020/10_12_2020_Facebook_Oculus.html?nn=3591568.


18 The rules could also create more scope for private as well as public enforcement of both existing antitrust rules and the expanded toolkit that is emerging from the debates over new ex ante regulation. For instance, hold-up problems distort potential competition and harm innovation and so are likely to be difficult to address through private enforcement whilst that is constrained to awarding historic rather than the prospective damages that would be incurred in a counterfactual in which the challenged conduct went unchallenged. However, given the uncertainty as to the precise beneficiaries of undistorted competition, one possibility might be to fund and empower an innovation fund for start-ups to act as a super-complainant that can bring cases on behalf of harm to start-ups as a whole. Any court-awarded damages might then be paid into that innovation prize pot that can in turn help to fund action to defend the opportunities and prospects of start-ups across the economy rather than a specific firm.

now reportedly investigating Google, who were also accused of below cost selling and forcing restrictions on interoperability of digital assistants by the CLO of Sonos in his testimony to the U.S. Senate.

At the same time we can see that Amazon and Google are working to place their digital assistants within cars and obtain the data and gatekeeper role that flows from that position. Google for example offers car firms Google Automotive Services (“GAS”) as an all-or-nothing deal in which access to Google Maps requires the manufacturer to use Google’s Play Store and voice assistant. Honda, Volvo, Renault, Nissan, and Mitsubishi have all signed up for the package, and Ford has also done a deal with Google which ensures that even if a rival assistant is installed by the user, only Google will have access to the user data that is generated. In contrast, BMW, GM, Audi, Jeep and Land Rover have all gone with Alexa, with Amazon declaring “voice agents should be interoperable on a single device (or in a vehicle), and voice-enabled products should be designed to support multiple, simultaneous wake words, so customers can easily interact with the voice service of their choice.”

As cars become autonomous, the gatekeeping role over the data that flows from these vehicles, and the consumption that occurs within them will become ever-more important. Once again, we can envisage that we will soon find ourselves asking whether aftermarket for pre-installed digital assistants are constrained or not by a somewhat more competitive foremarket for vehicles. As we do so we can but hope that Courts begin to question their apparently unshakeable faith in the strength of constraints imposed by a competitive foremarket. Certainly bringing to bear evidence on the reality of consumer reactions in the foremarket to changes in aftermarket offers will therefore be an indispensable step for plaintiffs seeking to bring complaints.

VI. NEXT STEPS

Having watched the development of the current generation of digital gatekeepers, the question now is whether we have to wait and see which firms succeed in obtaining the same power within the next generation of technologies before applying rules to tame that power. The opportunity is there to pre-empt not only the predictable exclusionary conduct of gatekeepers in these emerging technologies, but the damage that will be done to potential competition when exploitative self-preferencing and discrimination results in a hold-up market failure.

Such rules might for example require testing for discriminatory algorithms to ensure that seller identity (rather than objective characteristics) do not explain the outcomes. Indeed, such a framework could provide helpful certainty for investors and help to build an innovative but more decentralized next generation of technologies.

The opportunity to forge just such a legislative framework is now upon us. For example, the American Choice and Innovation Online Act that will soon be put to a vote by the U.S. Senate specifies that digital assistants and online platforms would be covered by its provisions. The DMA also specifies online intermediation services but is less clear on digital assistants, though the European Parliament and some governments have proposed that they be included. However, the UK has taken the approach of designating whether a firm has strategic market status in relation to specific activities and so its code of conduct and pro-competitive interventions would not apply to activities until they are designated. Designating a metaverse store or even a digital assistant might therefore prove challenging while the market is still emerging. Of course, if Facebook’s professed enthusiasm for an interoperable metaverse, and Amazon’s similar interest in interoperable digital assistants, turns out to be genuine, then we may not see the usual legal challenges and lobbying against this legislation and the designation process. Here’s hoping.

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21 See testimony of Eddie Lazarus (Sonos) before the U.S. Senate Committee on the Judiciary, available at https://www.judiciary.senate.gov/imo/media/doc/Eddie%20Lazarus%20Written%20Testimony.pdf.


23 See Apple v. Epic.

24 This can be expected to include less entry and a change in the nature of investment and innovation (less direct competitor products, less products that are complementary to, or interoperable with an independent rival challenger, and more products that are complementary to the gatekeeper’s product).

25 Section 2(g)(10) of the H.R. 3816, the American Choice and Innovation Online Act.

26 Building the Metaverse Responsibly.

27 However recent lobbying by Google and Apple suggest this may be a forlorn hope: See https://techcrunch.com/2022/01/20/tech-antitrust-self-preferencing-bill-american-innovation-and-choice-online-act/?guccounter=1 and https://www.theverge.com/platform/amp/2022/1/18/22890100/antitrust-bill-apple-google-big-tech-senate.
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