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Thinking ahead for Europe

Antitrust, Regulation and the Neutrality Trap:
A plea for a smart, evidence-based internet policy

Andrea Renda

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Abstract

When they look at Internet policy, EU policymakers seem mesmerised, if not bewitched, by the word 'neutrality'. Originally confined to the infrastructure layer, today the neutrality rhetoric is being expanded to multi-sided platforms such as search engines and more generally online intermediaries. Policies for search neutrality and platform neutrality are invoked to pursue a variety of policy objectives, encompassing competition, consumer protection, privacy and media pluralism. This paper analyses this emerging debate and comes to a number of conclusions. First, mandating net neutrality at the infrastructure layer might have some merit, but it certainly would not make the Internet neutral. Second, since most of the objectives initially associated with network neutrality cannot be realistically achieved by such a rule, the case for network neutrality legislation would have to stand on different grounds. Third, the fact that the Internet is not neutral is mostly a good thing for end users, who benefit from intermediaries that provide them with a selection of the over-abundant information available on the Web. Fourth, search neutrality and platform neutrality are fundamentally flawed principles that contradict the economics of the Internet. Fifth, neutrality is a very poor and ineffective recipe for media pluralism, and as such should not be invoked as the basis of future media policy. All these conclusions have important consequences for the debate on the future EU policy for the Digital Single Market.

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A plea for a smart, evidence-based internet policy

Andrea Renda[*]

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Introduction

Recently, EU policymakers seem to have become obsessed by the concept of 'neutrality' when discussing future digital policy. This is true not only for the well-known and long-lasting debate on 'network neutrality', which refers to the impossibility for an Internet Service Provider (ISP) to discriminate between the bits of traffic flowing on the portion of the network it manages.[1] The past few months have seen the concept of neutrality spread like an oil spot, giving rise to neologisms such as 'search neutrality' (e.g. in the Google antitrust case), 'device neutrality' (as invoked by the European Parliament already in 2011), and lately 'platform neutrality' (as endorsed at the end of 2014 by French and German governments).[2] In all this, EU politicians, and especially Members of the European Parliament, intuitively attach a positive meaning to the word: they would never dare to vote against it, as this would portray them as enemies of the public good, and in particular of end users. Not surprisingly, the Parliament's vote on the Connected Continent package in April 2014 pointed at a much stricter view of neutrality than the one originally proposed by the European Commission. Similarly, in the United States, net neutrality was publicly endorsed by Barack Obama in a message recorded at the end of 2014, in which the US President called on the Federal Communications Commission to strongly

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1 See the first contribution in the literature by T. Wu (2003), "Network neutrality, broadband discrimination", *Journal on Telecommunications and High Technology Law*, Vol. 2, pp. 141–178. The first response to the net neutrality problem was given by C.S. Yoo (2004), "Would Mandating Broadband Network Neutrality Help or Hurt Competition?: A Comment on the End-to-End Debate", *Journal on Telecommunications and High Technology Law,* Vol. 3 and elaborated later in C.S. Yoo (2005), "Beyond Network Neutrality", *Harvard Journal on Telecommunications and High Technology,* Vol. 19 and C.S. Yoo (20018), "Network Neutrality, Consumers, and Innovation", University of Chicago Legal Forum. For an illustration of the network neutrality debate, see A. Renda (2008), "I own the pipes, you call the tune: The net neutrality debate and its (ir)relevance for Europe", CEPS Special Reports, CEPS, Brussels, and A. Renda (2011), "Neutrality and Diversity in the Internet Ecosystem", CEPS Special Report, CEPS, Brussels. See also, for a literature review and a progress report, Jan Krämer, Lukas Wiewiorra and Christof Weinhardt (2013), "Net neutrality: A progress report", *Telecommunications Policy*, Vol. 37(9), pp. 794-813.

2 See the European Parliament's Resolution of 17 November 2011 on the open internet and net neutrality in Europe (www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0511+0+DOC+XML+V0//EN). On platform neutrality, see the report published by the French national digital council (https://edri.org/french-digital-council-publishes-report-platform-neutrality/). See also J.-H. Jeppesen, "French and German Ministers Should Not Confuse Platform Neutrality with Net Neutrality", (https://cdt.org/blog/french-and-german-ministers-should-not-confuse-platform-neutrality-with-net-neutrality/).

endorse net neutrality in its revision of the 2010 Open Internet Order. The FCC, formally an independent agency, eventually followed the *desiderata* of the President by casting a vote in favour of network neutrality on 26 February 2015. The unprecedented feature of that vote was that net neutrality was presented, more than a mere regulatory issue, as a fundamental right of the end users, thus calling for protection at a higher, constitutional level.[3]

All in all, reality suggests that no politician feels comfortable when standing against the 'neutrality' totem. And indeed, there are many reasons to believe that neutrality is, in many circumstances, a useful attribute for the Internet: but it amounts to a means, not an end in itself. At the same time, a closer look raises doubts as to whether neutrality, applied to the Internet ecosystem, is always the best choice for end users or for society as a whole. Moreover, the current state of the EU debate on Internet policy reveals that, in many domains, EU proposals are at once sanctifying neutrality as the Holy Grail of the Internet, at the same time sneakily proposing rules that fundamentally contradict the neutrality principle. This is leading to the birth of an array of new monsters, including rules that seek to achieve net neutrality through 24/7 patrolling of the Internet;[4] rules on platform liability coupled with search neutrality obligations; legislation pursuing media pluralism and access to content through neutrality obligations; and policy that pursues neutrality at the same time that it seeks to segment the Internet through the imposition of cloud localisation requirements.[5] In this brief paper, I argue that these rules are fundamentally flawed and critically detrimental to end users and to the Internet ecosystem as a whole.

1.   Why did we want network neutrality in the first place?

The word neutrality has been given many different definitions and interpretations over the past decade. Interestingly, if not worryingly, it was used as a synonym of very disparate terms. More specifically, in the net neutrality debate the following angles have been taken by commentators and advocates.

- *Anonymity*. When the network neutrality debate was in its infancy, in the early 1990s, neutrality was considered as a key safeguard to preserve a user's anonymity and freedom to upload and download any content without being inspected or prosecuted. This attribute was closely related to the end-to-end design of the network, which entailed that the intelligence would be exclusively located at the edges of the Internet (i.e. with end users), and not at the core.[6] Early legislation, such as, inter alia, the 1998 Digital Millennium Copyright Act in the United States and the 2000 E-Commerce Directive in the EU, reflected

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3 See http://www.fcc.gov/document/fcc-adopts-strong-sustainable-rules-protect-open-internet

4 See A. Renda (2013), "Net Neutrality and Mandatory Network-Sharing: How to disconnect the continent", CEPS Policy Brief No. 309, CEPS, Brussels, 18 December (on the "Stockholm syndrome").

5 The debate on cloud localisation requirements emerged after the Snowden revelations and gave rise initially to commercial offers to store data within the EU (or a given member state). The debate on the US-EU safe harbour framework is leading to proposed legislation to force the localisation of EU citizens' data within the territory of the EU or any other jurisdiction with adequate data protection legislation. See A. Renda (2015), "Cloud privacy law in the United States and in the European Union", forthcoming in Regulating the Cloud: Policy for Computing Infrastructure, Christopher S. Yoo and Jean-François Blanchette (eds), Cambridge, MA: MIT Press.

6   On the role of anonymity in net neutrality in the debate animated by David D. Clark, one of the original creators of the end-to-end protocol on the Internet, see in particular D.D. Clark and M.S. Blumenthal (2007), "The End-to-End Argument and Application Design: The Role of Trust" (http://groups.csail.mit.edu/ana/People/DDC/E2E-07-Prepub-6.pdf).

this original design: ISPs (Internet service providers) were considered as '*mere conduits'*, and thus could not be held liable for the conduct of their subscribers. They could not (and were in any case not supposed to) monitor user behaviour and inspect traffic, just as governments, too, could not monitor and inspect traffic.

- *Competition and fair business practices.* Since the mid-2000s, and in particular after the 2005 *Madison River* case in the US, net neutrality was framed as a problem of competition between telcos and over-the-top (OTT) players.[7] The concern raised by the 'neutralists' was that vertically integrated ISPs had a strong incentive to block OTT applications such as VoIP (Voice over Internet Protocol), which could potentially erode their revenues. Even without blocking them altogether, according to this view, ISPs may have an incentive to intentionally degrade the quality of OTT applications, in a way that could tilt the competitive balance in favour of the ISP's own products. This would amount to a form of non-price discrimination, or a refusal to deal in more orthodox antitrust terms. More recently, the debate on anticompetitive behaviour by ISPs has extended to so-called 'fair business practices' in vertical value chains: these are most often related to the fact that, absent mandatory net neutrality legislation, ISPs could intentionally degrade the quality of the most QoS-dependent applications, to induce them to accept to pay a minimum QoS (quality of service) fee. Even Tim Berners Lee, one of the founders of the Web, recently observed that, absent neutrality legislation, innovative app providers might be forced to "bribe their ISPs to start a new service".[8]

- *Innovation.* Part of the debate on net neutrality focused on its impact on innovation. This entails the so-called 'next Google' or 'next Facebook' argument, according to which, since the neutral design of the Internet has made it possible for very small start-up companies to enter the marketplace and become huge players, modifying this feature would jeopardise the stunning level of innovation observed so far, raising barriers to entry in the market and transforming the Internet into a ring-fenced property of the ISPs. In addition, should the Internet evolve into a two-speed or multi-speed environment, with some applications enjoying better QoS than others thanks to the payment of an ad-hoc fee, new entrants with limited financial resources would be doomed to occupy the 'dirt track' of the Internet, and this would inevitably prevent them from showing what they're great at.

- *User choice.* Quite often the debate on net neutrality focuses on the need to ensure that end users have access to all the content and applications they want, anywhere and from any device. Blocking or throttling applications would, of course, reduce the amount of information that users can have access to, at any time. Accordingly, legislation that allows the creation of specialised services or 'toll lanes' over the Internet, and even zero-rating offers that tie the use of a device to access to a restricted number of intermediated services would be contrary to the fundamental principles of user choice and empowerment.[9]

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7 See Renda (2011), "Neutrality and Diversity"*,* op. cit.

8 See Brian Fung (2014), "World Wide Web inventor slams Internet fast lanes: 'It's bribery'", *Washington Post*, 19 September (http://www.washingtonpost.com/blogs/the-switch/wp/2014/09/19/world-wide-web-inventor-lashes-out-at-internet-fast-lanes-its-bribery).

9 Over the past few years, zero-rating has spread in many OECD countries. Regulators in Chile, the Netherlands, Slovenia and Canada explicitly prohibited zero-rating, while regulators in Germany, Austria and Norway publicly stated that zero-rating violates network neutrality. A scholar who has

- *Openness.* In presenting the 2013 Connected Continent proposal, the European Commission referred to network neutrality as "what keeps the Internet open". As explained by the U.S. FCC in reviewing its Open Internet Order in February 2015, "an Open Internet means consumers can go where they want, when they want".[10] In more practical terms, at the infrastructure level, this means that ISPs should not be allowed to block access to legal content, applications, services or non-harmful devices (*no blocking*); to impair or degrade lawful Internet traffic on the basis of content, applications, services, or non-harmful devices (*no throttling*); and/or to favour some lawful Internet traffic over other lawful traffic in exchange for consideration of any kind (*no paid prioritisation*). More generally, the FCC established as a more general rule that broadband providers shall not unreasonably interfere with or disadvantage consumers' access to the Internet.

- *Media pluralism and freedom of expression.* In the past few years, net neutrality has also been prominently described as tightly related to media pluralism.[11] For example, in its contribution to the NET Mundial Conference, the European Broadcasting Union stated: "it supports a strong regulatory framework for net neutrality, reflecting the fact that the openness and non-discriminatory features of the Internet are key drivers for innovation, economic efficiency and safeguarding media freedom and pluralism."[12] The relationship between neutrality and pluralism stems from the simple observation that if ISPs block, throttle or in any way discriminate against traffic, they might filter out unwanted media outlets or intentionally degrade non-affiliated sources of information. An ad-hoc EU High Level Group on Media Pluralism and Freedom of Expression published a report in January 2013, recommending that "channels or mechanisms through which media are delivered to the end user should be entirely neutral in their handling of this content. In the case of digital networks, Net Neutrality and the end-to-end principle should be enshrined within EU law".[13]

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been quite active in arguing against zero-rating offers is Barbara van Schewick of Stanford Law School. She has recently proposed that the new FCC rules should explicitly ban two types of zero-rating: 1) zero-rating in exchange for edge-provider payment and 2) zero-rating of selected applications within a class of similar applications without charging edge providers. See B. van Schewick (2015), "Analysis of Proposed Network Neutrality Rules", 18 February (http://cyberlaw.stanford.edu/downloads/ vanSchewick2015AnalysisofProposedNetworkNeutralityRules.pdf). See also Antonios Drossos (2015), "Guest blog: The real threat to the open Internet is zero-rated content", World Wide Web Foundation, 17 February (http://webfoundation.org/2015/02/guest-blog-the-real-threat-to-the-open-internet-is-zero-rated-content-continued/).

[10] http://www.fcc.gov/openinternet.

[11] See L. Belli and P. De Filippi (2013), "The value of Network Neutrality for the Internet of Tomorrow: Report of the Dynamic Coalition on Network Neutrality"; and also L. Belli and M. Van Bergen, (2013). "Protecting Human Rights through Network Neutrality: Furthering Internet Users' Interest, Modernising Human Rights and Safeguarding the Open Internet". Steering Committee on Media and Information Society. And on free speech, see also www.aclu.org/net-neutrality and www.savetheinternet.com/net-neutrality-what-you-need-know-now

[12] See EBU's position relating to the Commission proposal for a regulation laying down measures concerning the European Single Market for Electronic Communications and to achieve a Connected Continent, 22 November 2013.

[13] http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/HLG%20Final%20Report.pdf.

2. Is current net neutrality policy tackling these concerns?

This section looks at the policy objectives pursued by net neutrality, as described in section 1 above, and assesses if current approaches have been, or are likely to prove, effective in addressing the related concerns.

2.1 From anonymity to Big Brother?

Concerning anonymity, it is clear that the current debate on Internet policy does not look at the right to surf anonymously as a policy goal per se, with some isolated exceptions.[14] This is due to a number of concurring reasons. First, the need to ensure copyright enforcement and protection on the Internet has led to a gradual relaxation of the 'mere conduit' principle that entailed the lack of ISP liability for the infringing behaviour of their subscribers. Measures such as the French HADOPI 'three-strikes law' and numerous other laws introducing a graduated response to copyright infringement effectively considered ISPs as cyber-police.[15] Second, security reasons have led to the explosion of mass surveillance activities on the Internet, undertaken both by public authorities alone, and in cooperation with private Internet intermediaries such as ISPs. The last generation of network and information security legislation, such as the recent Executive Order on Cybersecurity adopted by the White House in April 2015, critically targets intermediaries as potential facilitators of unlawful activities and encourages them to share all relevant information about potential threats to the resilience of the national critical information infrastructure.[16] Third, the explosion of an array of new applications and the Internet of Things requires extensive packet detection and traffic management in order to ensure communications at various levels of quality and latency.[17] Against this background, the EU debate has rapidly moved towards protecting net neutrality through pervasive monitoring of quality of service, as already foreseen (although implicitly) in the 2009 Universal Service Directive, which introduced the possibility for national regulators to intervene and impose a minimum quality of service, should ISPs not intentionally throttle certain traffic. The latest official version of the draft Connected Continent package, currently under trilogue between the European Commission, the European Parliament and the Council, *de jure* forces regulators to monitor the Internet on a 24/7 basis, in all portions of their territory, to find out if a given bit of traffic is being discriminated against. Against this background, ensuring the neutrality of the network no longer means pursuing user anonymity; rather, it is based on Big Brother-like patrolling of the Internet, to ensure that non-discriminatory behaviour is detected and sanctioned.[18]

2.2 Competition and fair business practices: Is there a level playing field?

While original concerns on the anticompetitive effects of traffic management practices focused on the ISPs' potential to abuse their market power (i.e. Section 2 of the US Sherman Act and Art. 102 TFEU in Europe), today the issue is often reversed. As a matter of fact, while it is true

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[14] See e.g. www.torproject.org/.

[15] See A. Renda (2011), *Law and Economics in the RIA World*, Amsterdam: Intersentia, section 5.8.

[16] See Executive Order -- Promoting Private Sector Cybersecurity Information Sharing (www.whitehouse.gov/the-press-office/2015/02/13/executive-order-promoting-private-sector-cybersecurity-information-shari).

[17] See the declarations by Nokia's CEO (www.cnet.com/news/nokia-knocks-net-neutrality-self-driving-cars-wont-get-the-service-you-need/).

[18] See A. Renda (2013), "'Net Neutrality and Mandatory Network-Sharing: How to disconnect the continent", CEPS Policy Brief No. 309, CEPS, Brussels, 18 December (on the "Stockholm syndrome").

that dominant ISPs could potentially engage in anticompetitive conduct, such as discrimination or refusal to deal, resulting in instances of blocking, or granting different treatment to equivalent transactions (throttling, paid prioritisation), EU policymakers are gradually discovering that market power is distributed across all layers of the value chain, and thus that potentially a large IT giant could exploit superior bargaining strength vis-à-vis ISPs. In Europe, this is leading to rather counter-intuitive situations in which mobile operators are considered dominant by telecom regulators and, at the same time, victims of predatory behaviour on the part of large IT firms.[19] All this is inconsistent with antitrust law and economics, as dominance must be assessed in light of existing constraints exerted not only from rivals, but also from upstream and downstream players.[20] A market player cannot be defined as dominant by one authority, and as dominated by another.

Competition between an ISP and an OTT service can also be imbalanced if the former bears costs that the latter does not face, such as network maintenance and upgrade costs. Just as network maintenance and upgrade are normally included in access charges determined by regulators for new entrant e-communications operators that rely on the incumbent's infrastructure under the EU Access Directive, there is no economic reason why the same cost would not have to be charged to those operators that provide a similar service thanks to the existence of a pre-existing telecoms infrastructure. Furthermore, if an OTT service ends up representing half of the IP traffic carried by a single ISP, the issue becomes critical: while it is true that the OTT service creates positive externalities and increases traffic for the ISP, not being able to monetise this additional traffic can be disastrous for the infrastructure operator. This is the issue that led the DC Circuit Court of Appeals to decide against the 2010 Open Internet Order in *Verizon v. Netflix* in January 2014. Furthermore, the relationship between net neutrality and competition ultimately rests in the principle of non-discrimination. To the extent that an ISP does not discriminate between types of traffic, i.e. applications that ideally fall into the same relevant market (including, where appropriate, the ISP's own vertically integrated service), there is no reason to believe that charging for minimum service quality would be of any relevance to antitrust law, let alone economic regulation.

Moreover, despite the absence of ad-hoc neutrality legislation, OTTs have been gaining market share everywhere in Europe: players such as Skype and Whatsapp (now adding voice calls to its successful messaging service) have eroded the margins of ISPs without having to pay for the use of the bandwidth. While this is certainly a short-term benefit for the end users, one wonders whether ISPs will find it useful to continue investing in an infrastructure that will increase profit opportunities for other companies. As a result, end users might suffer in the long term due to lack of sufficient incentives to invest in new infrastructure. Against this background, the concerns about securing a level playing field that were raised after 2005 have led to a situation in which the pendulum has swung to the other extreme, with possible consequences in terms of infrastructure investment.

In summary, net neutrality seems neither a sufficient, nor an essential remedy for the perceived lack of a level playing field between telcos and OTTs. The European Commission's current attempt to help national regulators in considering, where appropriate, OTT players in defining relevant markets is a more meaningful approach to inter-layer competition than a

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[19]   See inter alia http://bgr.com/2014/12/12/apple-iphone-antitrust-investigation/, http://www.androidauthority.com/apple-iphone-carrier-deals-europe-examination-antitrust-abuse-176512/, and http://www.zdnet.com/article/apple-under-european-investigation-over-iphone-ipad-sales-tactics-and-4g-restrictions/.

[20] See Court of Justice of the European Union in *Hoffman-La Roche*, defining dominance as the power to "behave to an appreciable extent independently of competitors, customers and … consumers"; C-85/76 - Hoffmann-La Roche v Commission, 1978.

remedy that tilts the balance in favour of OTTs. Depending on market circumstances, market power might be found upstream or downstream, thus in the hands of OTTs or telcos. But the relevance of this debate is now weakened, at least in the US, since the FCC is placing emphasis on the 'public utility' nature of Internet access, and is thus imposing neutrality obligations on all carriers regardless of their monopoly power: this realises a quantum leap from net neutrality, from regulatory issue to constitutional right.

2.3 Innovation and neutrality: Friends or foe?

The fact that neutrality is essential for innovation is a recurring *mantra*, especially in Brussels. However, reality seems to be far more *nuanced* compared to the fictitious, partisan statements we hear on net neutrality every day. We attempt to explain in plain words below why this is the case, although the issue is rather complex in and of itself.

To be sure, the original design of the Internet has made it possible for companies like Google and Facebook to emerge and quickly become Internet giants (too big, according to some EU policymakers). At the same time, the gradual 'platformisation' of the Internet has gradually shifted the most turbulent and creative areas of the Web into higher layers. The original, layered architecture of the Internet is now being replaced by a patchwork of multi-sided platforms operating with different business models and with differing levels of openness.[21] Platforms such as Apple's iOS, Google Android, Amazon Web Services and Microsoft Windows/Azure are lowering barriers to entry for smaller players wishing to enter the Internet ecosystem.[22] At the same time, importantly, such platforms are being commoditised by applications that are platform-independent: in most cases, this occurs when apps are downloadable for free on any platform, and then manage their customer bill and data directly from the cloud. This is the case of very successful apps such as Uber, Spotify and many others. This blossoming richness and diversity at the app layer is one of the key drivers of innovation in the current Internet ecosystem. Entry possibilities are simply shifting to higher layers, or downstream in this complex supply chain.[23]

Other issues must be crucially taken into account. Importantly, certain innovative services cannot emerge without minimum quality of service: think about Netflix, but also e-Health, IoT applications, innovative payment systems and many others, which definitely cannot work if they are not aided by some guarantee of service quality and latency. Similarly, the lack of

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[21] K.C. Claffy and David D. Clark (2013), "Platform Models for Sustainable Internet Regulation", TPRC 41: The 41st Research Conference on Communication, Information and Internet Policy, 15 August (http://dx.doi.org/10.2139/ssrn.2242600).

[22] See Manuel Palacin, Miquel Oliver, Jorge Infante, Simon Oechsner and Alex Bikfalvi (2013), "The Impact of Content Delivery Networks on the Internet Ecosystem", *Journal of Information Policy*, Vol. 3, pp. 304-330.

[23] A deeper reflection reveals that this has always been the case in the history of the Internet revolution, and more generally in the history of information technology. In complex systems with multi-layered value chains, strong indirect network effects and a modular design, certain modules become pivotal as they chiefly affect end users' preferences. This was initially the case of so-called 'de-facto industry standards', such as the IBM processors, and later Microsoft Windows; more recently they have taken the form of multi-sided platforms, such as Google's home page and Facebook's social network page. In the future, they are likely to become more centred on the Internet of Things and content delivery: players such as Spotify and Netflix are already eroding the leadership of the GAFA (shorthand for American tech giants Google, Apple, Facebook and Amazon), triggering reactions such as Google's YouTube restructuring and Apple's new music streaming service. In all this, the tendency of innovation over the Internet is quite consistent over time: large-scale innovation moves network effects and leading platforms at higher layers of the Internet ecosystem, at the same time commoditising lower layers.

incentives to invest in new infrastructure can also jeopardise the emergence of innovative services, which critically depend on the availability of sufficient bandwidth. Furthermore, new technologies such as 5G mobile broadband systems will adopt a multi-tier architecture consisting of macrocells, different types of licensed small cells, relays, and device-to-device networks to serve users with different quality-of-service. Since this clearly entails traffic management and prioritisation, it is not clear if pro-neutrality legislation would lead to a major drawback in the rollout and uptake of 5G networks.[24]

Finally, net neutrality legislation at the infrastructure layer can, under certain circumstances, divert investment incentives towards the creation of private networks for the provision of enhanced quality services: this might lead to acceleration in the fragmentation of the Internet, and an even speedier loss of neutrality. A good example is the creation of large Content Delivery Networks that interconnect with the public Internet very close to the end users, such as those owned by Netflix and Akamai. I return to this point below.

In summary, innovation can emerge both under neutrality and diversity: the more the Web grows, the more applications diverge in terms of required latency and capacity; the more user attention becomes scarce, the more some degree of traffic optimisation will be needed to protect the end user experience.

2.4 User choice and democracy

Is net neutrality really so effective in promoting user choice and empowerment? To be sure, it allows users to access all content of choice, without undue discrimination. But it does not protect end users against restrictions to content availability and application discrimination applied by platforms located at higher layers. A quick observation of current practice on the Internet reveals that most of the discrimination takes place at the higher layers, not at the infrastructure layer. Large platforms block or degrade certain applications, and search engines, by definition, have to make a selection in order to prove useful for their end users. Whether these practices are good or bad for end users is a question that still awaits a good, evidence-based, debate. In principle, behavioural economics suggests that on the Internet, "a wealth of information creates a poverty of attention".[25] This, in turn, leads end users to increasingly rely on any intermediary that is credibly able to select the most relevant information and offer it to the end user, thus reducing search costs and, more generally, transaction costs. At the same time, it is important to reflect on the extent to which market forces alone could provide the right incentives for intermediaries to select information in a way that offers the best possible service to the end user. And most importantly, as I will argue below, there is reason to doubt that neutrality in the selection of information would be necessarily in line with the interest of the end users.

Also, the jury is out concerning questions of democracy. It is very important to avoid extremist stances in the debate: while neutrality can in many circumstances contribute positively to democracy, intended as the granting of equal rights to all users and the absence of censorship (at least at the network level), the complete standardisation of Internet offerings has very little to do with democracy. The prevailing rhetoric in Brussels (and now Washington) is as follows:

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[24] See, inter alia, S. Lauson (2015), "Suddenly, net neutrality doesn't look so great for 5G", IDG News, 4 March (www.pcworld.com/article/2893032/5g-net-neutrality-may-be-headed-for-a-showdown.html).

[25] See H.A. Simon (1971), "Designing Organizations for an Information-Rich World", in Martin Greenberger (ed.), *Computers, Communication, and the Public Interest*, Baltimore. MD: The Johns Hopkins University Press. pp. 40–41.

since Internet should be treated as a service of general interest, just like water, everybody should have access at the same (affordable) terms and conditions. No one should be able to access the Internet at a better speed, or at more favourable conditions than others. However, while this statement sounds very attractive, in reality it is controversial. Is a world in which everybody has access to the basic postal service, but no one can have access to express courier services more democratic than the world we live in? Does democracy entail that only public hospitals exist, and no private clinics? Is it democratic to have just state highways with no toll lanes, rather than forms of traffic optimisation based on users' preferences? Rather than mirroring democracy, full-fledged, rigid net neutrality rules are equivalent to what the Trabant was in Eastern Germany: the only car that people could have, very neutral, very bad, very cheap, identical for everybody. It became famous in the Western world when the Berlin wall fell 25 years ago, and thousands of East Germans drove their Trabants over the border: once in the 'free' world, they immediately abandoned their 'neutral' cars, and started to enjoy their new, non-neutral life.

As a result, the openness and democracy angle of the net neutrality debate appears to be heavily polluted by a layer of rather superficial ideology. Once again, I do not mean to argue that neutrality is always bad for democracy. On the contrary, I believe that censorship should be avoided at all layers of the Internet architecture. At the same time, presenting democracy as a situation in which only one Internet offer exists for all users does not do justice to the richness of user preferences and of the Internet itself. Once again, reality is more complex; we need a more evidence-based debate before we propose unacceptably extreme visions of what is good and bad on the Internet.

2.5 Openness: A means, not an end

On the question of 'openness', net neutrality cannot be a stand-alone, self-sufficient solution. While it is true that the Internet could develop initially also thanks to the non-proprietary standards that govern it, it would be a mistake to believe that once net neutrality is mandated, the Internet would become open, let alone neutral. Hence, the European Commission is wrong in stating that net neutrality is what keeps the Internet open.

Following the most widespread definition, openness means that users can have access to any content, anytime, anywhere and from any device. But it is clear that the Internet ecosystem has never been like this, and is increasingly less so. Since the development of mass personal computing, all business models on the Internet have evolved in a way that mixes proprietary elements with open ones. Microsoft Windows was an early example of a semi-open architecture: it brought enormous advantage to its end users due to enhanced standardisation and network effects, despite the fact that it was not interoperable with other operating systems. Even free and open source software, initially characterised by full openness (to the extent that the first licenses like the GPL were 'viral', i.e. they could not be used in combination with proprietary software), gradually became part of largely proprietary business models. And as a matter of fact, the real champions of open source software today are companies that possess huge patent portfolios, and often use open source software as a 'Trojan horse' to conquer customers (e.g. IBM has become over the past decade the most powerful sponsor of Linux). In recent years, mobile access to the Internet has been dominated by platforms that are not completely open. iPhone owners cannot use Android or access Android-specific or Windows-specific applications, and vice versa. More generally, many great inventions at the logical and applications layer of the Internet have initially entailed a mostly proprietary model, and later

became more open. Forcing openness from the very beginning might just not be a good idea to start with.[26]

At the same time, there is a more subtle aspect of the openness debate that is worth recalling here. As a matter of fact, it is not always true that more openness is better. For example, the usage restrictions featured by PDF files are harming users' ability to modify the files they receive: but it is exactly this feature that has made the fortune of the PDF. Given restrictions on file manipulation, documents can circulate much more easily, and trust between senders and receivers becomes easier to establish. Likewise, the closed nature of the iTunes-iPod-FairPlay architecture has made it possible, for Apple, to create the first online store for legal music downloads with a sustainable business model. Any alternative, including a more open architecture with no vertical integration between the device and the format of the downloaded songs, would have meant the failure of the business model itself.[27]

Openness of course does not coincide with neutrality, and is broader since neutrality entails strict non-discrimination between bits of traffic.[28] That said, since openness is not entirely a reality on the Internet, neutrality *a fortiori* cannot be. And indeed, it is clear that even with mandatory network neutrality, traffic on the Internet would be discriminated and toll lanes would continue to abound. Just think about the growing role that Content Delivery Networks (CDNs) play on the network: players such as Akamai, Limelight and Level 3 offer services that accelerate traffic on the Internet, and are used by IT giants such as Apple to ensure that services such as FaceTime work better than the average, non-accelerated application.[29] In addition, some other players have built this capacity to exploit in-house caching rather than buying it from third parties: this is the case for many players, including Skype and Google, which invested in a private infrastructure made of a large networks of servers in order to be able to offer a better service to their end users. Netflix itself used Limelight until 2012 and later moved to an in-house CDN called OpenConnect.[30]

Against this background, one would conclude that the only way to keep the Internet fully open and neutral would be to impose neutrality obligations at all layers of the Internet architecture. Would this be desirable? Not really: Internet freedom should imply also freedom to experiment with closed or semi-open architectures, and with vast differentiation of product offerings to match different user preferences. Conversely, being forced to accept openness and neutrality has very little to do with freedom.

2.6   Net neutrality will never be an answer to media pluralism

Media pluralism is one of the most pressing challenges of today's digital policy. While some commentators originally expected that the Internet would address the issue of pluralism by exponentially increasing the sources of information available to the end users, reality showed that the provision of information on the Internet is becoming even more concentrated than in traditional media. This trend has been captured well by Columbia University Professor Eli Noam, who showed in 2011 that media ownership tends to become more concentrated at every new generation of communications, from radio to newspapers, to televisions and the Internet.

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[26]   See Boston Consulting Group (2011), "The new rules of openness'' (www.libertyglobal.com/pdf/new_rules_%20of_openness6-en.pdf).

[27] See Martijn Poel, Andrea Renda and Pieter Ballon (2007) "Business model analysis as a new tool for policy evaluation: Policies for digital content platforms", *info*, Vol. 9, No. 5, pp.86–100.

[28] In practice, the two concepts are often used interchangeably.

[29]   See D. Rayburn (2014), "Apple Building Out Their Own CDN To Deliver Content To Consumers" (http://blog.streamingmedia.com/2014/02/apple-building-cdn-software-video-delivery.html).

[30] See https://openconnect.itp.netflix.com/

The issue of pluralism was associated even more strongly with net neutrality as governments have shown the tendency to violate neutrality by shutting down social networks and filtering out forms of communication such as microblogs, in countries like Egypt, Turkey, China, Russia, Venezuela and others.

However, there are three main reasons why net neutrality cannot be the answer to the thirst for media pluralism evoked by many policy-makers and scholars.

- Censorship, even if made impossible at the infrastructure layer, can be exercised by forcing intermediaries to filter communication, even if no blocking takes place at the infrastructure layer. One clear example is the decision by the Turkish government to temporarily shut down Facebook, YouTube and Twitter until they removed from their sites the picture of a prosecutor taken hostage and killed by militants in Istanbul in early April 2015.[31]

- Relatedly, media pluralism is not guaranteed at all by the absence of blocking or discriminatory behaviour by ISPs. Rather, it would require a similar approach at all layers of the value chain, since content could otherwise be filtered out by large platforms, news outlets, cloud providers, etc.[32]

- Even if no blocking, throttling or discrimination takes place at all layers of the value chain, neutrality *tout court* would not be sufficient to guarantee pluralism. The reason is simple: pluralism requires not only that a plurality of sources of information is *present* on the Internet; on the contrary, it requires that a plurality of sources of information is *exposed* to the end user. Against this background, a neutral platform would inevitably end up selecting information from the most popular sources: the polarisation of sources of information would be exacerbated, rather than reduced, by a strict neutrality requirement.[33]

2.7 Summing up: What reasons remain valid for net neutrality regulation?

The previous sections have shown that, regardless of the intrinsic merit of the word and the underlying concept, a lot more has to be proven before net neutrality can be considered as a universal principle, able to address all the concerns raised with respect to 'net diversity' scenarios. Even the decision by the US Federal Communications Commission (FCC) on net neutrality of February 2015 is not based on any in-depth evidence-based analysis, or at least no such analysis has been published. As things stand, net neutrality does not appear to be a stand-alone remedy that would fix any of the identified problems, nor would it achieve any of the officially pursued objectives as set out in section 1 of this paper. That said, one should not immediately conclude that net neutrality should not be mandated at the infrastructure layer. Simply no one has brought sufficient evidence that this is the case, and probably the debate

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[31] See "Facebook, Twitter to Appeal as Turkey Blocks Social Media", Bloomberg, 6 April 2015 (www.bloomberg.com/news/articles/2015-04-06/social-media-blocked-in-turkey-on-prosecutor-order-hurriyet).

[32] In order not to increase complexity for the reader, I leave aside here the first amendment debate raised by Verizon in the US, which raises the issue whether prohibiting ISPs from exercising editorial powers on the content they transfer would amount to a violation of their freedom of speech http://www.globalresearch.ca/when-net-neutrality-becomes-programmed-censorship-2/5434400 (last visited on April 12, 2015).

[33] See e.g. C.R. Sunstein (2001), *Republic.com*, Princeton, NJ: Princeton University Press and C.R. Sunstein (2009), *On Rumors: How Falsehoods Spread, Why We Believe Them, and What Can Be Done*, Princeton, NJ: Princeton University Press.

has focused on the wrong motivations. Imposing network neutrality might still be a good idea, but for other reasons. In this section, I try to imagine such potential motivations.

A first reason why it might be a good idea to impose net neutrality is that the infrastructure layer is by far the most stable in the Internet ecosystem. Accordingly, it might be easier to monitor practices adopted by ISPs compared to what takes place at higher layers, where the Schumpeterian gale of 'creative destruction' operates at the speed of light, making it impossible to define markets, detect practices and administer sanctions. Net neutrality legislation, in this respect, would mean keeping the Internet open at the lowest level of its architecture, and then monitoring the market at higher levels to discourage abusive practices, which would result in a violation of end-users' rights to a reasonably open Internet. This regulatory option, of course, would come at a cost, i.e. the loss of incentives to ISPs to roll out new public infrastructure.

A second, related reason that might favour pro-net neutrality legislation is that it is a lot easier and efficient to implement this rule, compared to any of the alternatives[34]. This would be due to the fact that, as I have noted in a previous paper, implementing legislation that implies difficult judgments such as whether the open internet is being 'materially impaired' might prove to be impossible[35]. What is material impairment? When does an impairment become material? How do we get to know the counterfactual (i.e. how much would a given ISP have invested in broadband infrastructure absent the neutrality provision)? Where in the network would we measure the impairment? Would this be in a sample of locations, or everywhere in the 'last mile', or in each apartment? How would we allocate responsibility between providers that manage consecutive trunks of the network, in case congestion is slowing down a service? Would this imply an ex-ante regulatory remedy or an ex-post enforcement tool?[36] Which parameters will we use to judge whether impairment is below or above the admitted threshold? Which services will be taken as a benchmark for QoS parameters? There is enough uncertainty in these questions to make any legislator want to run away from the issue.

A third reason why one would want to have neutrality legislation at the infrastructure layer is that this is a first step towards imposing neutrality at all layers of the Internet. As I argue in the next section, however, and despite the current emphasis being placed on neutrality as a universal concept, there are reasons to believe that this would be terrible news for Internet users (see below, section 3).

Finally, regardless of the underlying reason, several key observations emerge from the preceding discussion:

- Strict net neutrality regulation would remove some of the incentive motivating ISPs to invest in the open Internet and might lead to the creation of alternative, private networks in the attempt to reach end users with selected content (like Comcast does in the United States).

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[34] A similar argument, referring to net neutrality as a "bright-line rule", is made by B. van Schewick (2015), "Analysis of Proposed Network Neutrality Rules", 18 February (http://cyberlaw.stanford.edu/downloads/ vanSchewick2015AnalysisofProposedNetworkNeutralityRules.pdf)

[35] See A. Renda (2013), "Net Neutrality and Mandatory Network-Sharing: How to disconnect the continent", CEPS Policy Brief No. 309, CEPS, Brussels, 18 December (on the "first legislate, then think" syndrome).

[36] David D. Clark, Steven Bauer, William Lehr, K.C. Claffy, Amogh D. Dhamdhere, Bradley Huffaker and Matthew Luckie (2014), "Measurement and Analysis of Internet Interconnection and Congestion", paper prepared for 43rd Research Conference on Communications, Information and Internet Policy, Arlington, VA, 9 September (available at SSRN: http://ssrn.com/abstract=2417573).

- In a related vein, treating the Internet as a service of general interest, subject to strict neutrality requirements, may lead to enhanced public funding of basic Internet access, aimed at avoiding all sorts of discrimination between end users' terms of access and the ability to send and receive content. This approach might be pursued at the EU level through a prioritisation of broadband investment in the so-called 'Juncker plan'.

- Expecting ISPs to invest in the open Internet without being able to optimise traffic or create specialised services, and without being able to compete with CDN-enabled content providers, comes very close to "having your cake and eating it", or what I referred to as the 'Galileo syndrome' in a previous paper.[37] The only remaining incentive for ISPs to invest in better networks would be competitive pressure exerted by other ISPs. But either such competitive pressure is already there (in which case, there is no specific need to introduce net neutrality legislation, according to many), or there is a tiny chance that a less and less profitable market, such as EU broadband access, could attract significant investment and, accordingly, generate more vibrant competition in the years to come.

3. Should we expand neutrality to higher layers of the Internet architecture?

While the network neutrality debate still looms, the first steps of the Juncker Commission seem to have led to new efforts to extend the neutrality principle to Internet 'platforms', including, inter alia, wireless operating systems (Android, iOS, Windows Phone) and web services managed by Internet giants (e.g. Amazon cloud services). These proposals echo the recent positions adopted by the European Parliament (following mostly the German and French governments) on the need to adopt structural measures to reduce the market power of large Internet players (notably Google) and to ensure the portability of data across platforms to (allegedly) stimulate competition and avoid user lock-in effects. This trend confirms what some commentators had envisaged a few years ago: that the neutrality debate can easily spread to cover all layers of the Internet ecosystem and be transformed into a more general call for an all-neutral Internet. Whether this trend will continue in the next European Commission's proposed packages on the Digital Single Market and on Audiovisual Services, both expected in the coming months, is too early to predict. The European Commission has announced that it intends to launch a stakeholder consultation on the possible regulatory approach to 'digital platforms', although the contours of this initiative are still unknown at the time of writing.

Below, I briefly reflect on two possible extensions of neutrality principles that have been considered in the past months at EU level: search neutrality and platform neutrality.

3.1 Search neutrality: Heaven or hell?

One of the most famous applications of the concept of neutrality at higher layers of the internet architecture is emerging from the still rather obscure antitrust investigation launched by the European Commission against Google, reportedly coming closer to a final judgment in mid-2015. From the few documents that have left the premises of the European Commission in the past months, as well as from the official statement of Commissioner Margrethe Vestager on 15 April 2015 announcing the formalisation of allegations against Google for abuse of dominance, it seems clear that the most important part of the investigation is related to Google's alleged abuse of dominance, consisting of the manipulation of search results in favour of 'preferred'

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[37] See Renda, *Net neutrality and mandatory network sharing*, op. cit.

(often, Google's own) content and to the detriment of other results, demoted for various reasons.[38] Such behaviour, according to the European Commission, has the potential to foreclose smaller search engines such as those specialised in specific sectors ('verticals'), which end up being disadvantaged vis-à-vis the giant search engine powered by Google.

The main allegation against Google turns out being one of 'non-neutrality': Google is thought to unduly discriminate between Internet content by providing a non-neutral, non-objective view of the Internet. This implies, inter alia, algorithmic choices that demote bad-quality services, sites that only aggregate information without adding new one, and filtering out of illegal sites, hate speech and copyright infringing content.[39] But the obvious counter-argument is that a search engine is not supposed to be neutral: in particular, Google had just completed a transition from a 'ten blue links' model to that of an integrated search engine, which entails more editorial responsibility, and at the same time more relevant and satisfactory results for the end users. Paradoxically, the European Commission's case against Google is mostly summarised by this divergence: the Commission accuses Google of not being neutral, but any search engine, not just Google, would reply "why should I be neutral?"

Should search neutrality be a policy objective at all? Indeed, there are reasons to believe that a neutral search engine would be hated by consumers. As I mentioned in the previous pages, the key role of Internet intermediaries, and especially search engines, is to eschew neutrality by selecting the information that is likely to prove more useful and relevant for the end user. It is this reduction of complexity that makes them so pivotal in their role of gatekeepers of the Internet: just like our brain simplifies reality to make the abundance of information in the outside world more manageable and useful, a search engine has to reduce complexity to help us find our way through the Internet. This requires, inevitably, a ranking (and thus, a discrimination) of results, which can be based on relevance as well as on any other factor that is likely to increase customer satisfaction when using the search engine. As recalled by James Grimmelman,[40] users continually return to a specific search engine because they find the 'biased' or 'subjective' results to fit their needs, not because they find the results to be objective.

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[38] See European Commission Factsheet, Antitrust: Commission opens formal investigation against Google in relation to Android mobile operating system, Brussels, 15 April 2015 http://europa.eu/rapid/press-release_MEMO-15-4782_en.htm.

[39] For example, in both investigations carried out by the US Federal Trade Commission (FTC) and by the European Commission, UK search comparison site Foundem was one of the leading claimants, arguing that Google had anti-competitively degraded its ranking, causing loss of market share. As explained by Crane (2014), inter alia, the FTC found that Google's transformation of its search engine from a "ten blue links" system to an integrated search portal, in which Google itself takes more editorial responsibility, has meant innovation and enhanced consumer welfare, and positive results also for the types of content that were considered to be useful for the end users. Foundem was found to be a lousy service, and as such demoted by Google in what is definitely, and fortunately, a non-neutral search engine. See Daniel A. Crane (2014), "After Search Neutrality: Drawing a Line between Promotion and Demotion", *I/S: Journal of Law and Policy for the Information Society*, Vol. 9, No. 3; Marvin Ammori and Luke Pelican (2012), "Competitors' Proposed Remedies for Search Bias: 'Neutrality' and Other Proposals", *Journal of Internet Law*, Vol. 15, No. 11.; Daniel A. Crane (2012), "Search Neutrality and Referral Dominance", *Journal of Comparative Law and Economics*; Daniel A. Crane (2012), "Search Neutrality as an Antitrust Principle", *George Mason Law Review*, p. 1199; and Geoffrey A. Manne and Joshua D. Wright (2012), "If Search Neutrality is the Answer, What's the Question?", *Columbia Business Law Review*, 151.

[40] J. Grimmelman (2011), "Some Skepticism about Search Neutrality", in Berin Szoka and Adam Marcus (eds), *The Next Digital Decade: Essays on the Future of the Internet*, TechFreedom, and NYLS Legal Studies Research Paper No. 10/11 #20 (available at SSRN: http://ssrn.com/abstract=1742444).

Without entering into the merit of the Google investigation, which would go beyond the subject matter of this paper, it is clear that advocating neutrality for search engines is far from being a straightforward policy stance. Apart from what has already been explained above (that users are unlikely to want neutrality in a search engine), it is clear that implementing search neutrality would be undesirable in many respects. First, the polarisation of results induced by search engines purely based on relevance might lead to even greater barriers to entry for new companies that seek to enter the market. Since they have never been listed on the Internet, any crawling and mapping of the Internet performed by a search engine would not find them. And before they achieve a minimum scale of popularity, which would enable them to appear in the first page of a neutral search engine's home page, they might have already gone bankrupt.

Second, search neutrality would need to be verified, and this might require that Google, as well as all competing search engines, disclose their algorithms in a fully transparent way. However, apart from the fact that this would chill innovation by denying trade secret protection to the result of massive R&D investment, it would also expose the algorithm to attacks, as well as strategic behaviour aimed at exploiting the weaknesses of the algorithm to rank better in its results. Even this outcome would not be neutral in the end[41].

Third, and relatedly, such a remedy is being proposed as an antitrust remedy, although the current debate on platform regulation also hints at search neutrality as a way to promote pluralism (see next section). As an antitrust remedy, however, search neutrality requires a finding of dominance within a given relevant market, and this is prohibitively difficult to imagine if one takes antitrust seriously. More specifically, dominance – let alone its abuse – requires a situation in which an undertaking is able to behave, to an appreciable extent, independently of its competitors, customers and consumers. In other words, a situation in which a company is able to sit down and relax since no one is able to effectively and seriously challenge its market power. Notwithstanding the very high share of search queries that Google holds in Europe, the definition of dominance as ascribed by the Court of Justice of the European Union (CJEU) portrays a different situation compared to the one Google seems to be experiencing in Europe and globally. A market leader that constantly innovates to preserve its leadership is not a dominant company under EU antitrust law, regardless of the market share.

In summary, search neutrality is a flawed remedy, both in antitrust terms and even more as a general regulatory measure. In terms of antitrust, it amounts to throwing the baby out with the bath water, runs counter to consumer welfare and should be defined at a minimum as a disproportionate remedy under EU law. In regulation, it is simply an ill-conceived extension of the important, but *per se* controversial, principle of network neutrality.

3.2   Platform neutrality and regulation: Where all contradictions explode

The intrinsic contradictions of EU digital policy become fully apparent if one considers the proposals to regulate platforms and impose forms of neutrality on online intermediaries that have recently been tabled in Brussels. One of the first to use the expression 'platform neutrality' was the French National Digital Council (*Conseil National du Numérique*), which published a detailed report on this same concept in June 2014, following a 2013 request from the Ministry

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[41] The Financial Times reported on 16 April 2015 that a proposal currently making its way through the French senate could force Google to publish the details of how its search rankings are calculated. According to the newspaper, the proposed bill would allow the country's national telecoms regulator to monitor search engines' algorithms, with powers to ensure its results are fair and non-discriminatory (see www.ft.com/intl/cms/s/0/643f49ec-e285-11e4-aa1d-00144feab7de.html#axzz3XGqpfF5O).

of the Economy and Digital Affairs as well as the Secretary of State on Digital Affairs.[42] The report argued that platforms such as so-called GAFTAM (Google, Amazon, Facebook, Twitter, Apple, Microsoft) maintain their dominant position by three main operations: acquisition, diversification and exclusion,[43] and that in doing so, they harm competition to the detriment of consumers. In the following weeks, the French and German governments explicitly called on the Commission to establish regulation for essential platforms, invoking neutrality as one of the attributes of such platforms' future conduct.[44] The debate also surfaced in the US this year, when Blackberry CEO John Chen officially complained that Netflix had not made movies available for Blackberry phones, and invoking platform neutrality – or 'app neutrality' – as a much-needed remedy.[45]

The echo of these calls is also heard inside the European Commission. Some of the leaked documents related to the upcoming policy initiatives on the Connected Continent and the Digital Single Market hint at platforms as, very generically, multi-sided markets where suppliers and consumers of content, goods and services meet. In consideration of the fact that more than one third of Internet traffic goes to the only 1% of websites which are used in all member states, these 'platforms' are thought to significantly alter consumer choice by providing misleading information. Reference is also made to the difficulty for consumers in distinguishing between organic and paid-for search results, as well as the 'ranking' (order) of results. Being so powerful, platforms can also impose unfair contractual clauses to SMEs. Moreover, the digital single market is perceived as negatively affected by the lack of interoperability between platforms, and in particular by the fact that some apps only run on specific operating systems, some e-books are readable only by specific e-readers, etc.

That is all to say that the European Commission seems to have been pervaded by a neutrality delirium, which so far has not produced ad-hoc legislation, although this might just be a matter of weeks away. There are many reasons why platform neutrality is a *contradictio in terminis*. First, as already recalled, platforms are defined very broadly. Some commentators have observed that based on the proposed definition, even a mall can be a platform. Any newspaper is a platform, just like any game console. Spotify is a platform. Uber is a platform too. So, maybe the most vocal governments and the European Commission only wanted to refer to large, digital platforms. Or maybe to dominant, digital platforms. Or maybe to GAFTAM, or to GAFA, or perhaps only to Google. But then, an explanation should be given of why competition law would not be sufficient to tackle the problem. Maybe because it is an uphill battle for these platforms to define a relevant market and find dominance in contrast to what occurs at the infrastructure level, especially if one follows an orthodox antitrust approach. As a matter of fact, the common feature of these platforms is that they compete for end users, but they do it

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[42] See Conseil National du Numérique (2014), "Platform Neutrality: Building an open and sustainable digital environment", Opinion No. 2014-2, of the French Digital Council, Paris (www.cnnumerique.fr/wp-content/uploads/2014/06/PlatformNeutrality_VA.pdf).

[43] Platforms buy innovative start-ups that could threaten their dominance in the long run and/or that can be fruitfully integrated in their existing infrastructure in order to provide a more diversified platform. The report lists the acquisitions of the GAFTAM from 2010 to January 2014, which shows that these platforms have been engaging in acquisition and diversification. The last main move of the platforms is exclusion. For instance, the report argues that, when Google introduced Google Maps and Google Shopping, the traffic of websites offering similar services dropped significantly because their page rank suddenly worsened.

[44] See i.a. "Europe's demands on Google mount", *Financial Times*, 26 November 2014 (www.ft.com/intl/cms/s/0/66b5149e-758a-11e4-b082-00144feabdc0.html#axzz3WpR2sSn7).

[45] See Karl Bode, "No, 'App Neutrality' Is Not A Thing", 13 February 2015 (www.techdirt.com/blog/netneutrality/articles/20150122/08093329777/no-app-neutrality-is-not-thing.shtml).

with a rather different mix of products and services, and very different business models. And the fight to conquer end users' attention is a common feature of all market players, even in the traditional world. Since users can, and do, 'multi-home' by using services provided by various platforms at the same time, the existence of a number of large and heterogeneous players, which can be defined as large digital platforms, does not say anything about the existence of an antitrust problem. And even if one tries to define relevant markets for each of those platforms, possibly ending up with a single market for each of the GAFTAM, then the existence of high market shares could not be used as a proxy for dominance, since the economics of network effects and tipping suggests that in these markets the winner takes it all, and competition is normally very aggressively dictated by the need to secure a paramount role in the next generation of market products.[46]

Second, platform neutrality is an oxymoron, since platforms capture the attention of end users exactly because they violate the neutrality of the Internet and offer users a selection of Internet content. They normally do not block or hide content, but they necessarily prioritise content. App stores present end users with a selection of the best apps, the newest apps and those that best fit the user's needs. Search engines are all about relevance and salience, and compete on the quality of their selection, as well as on their ability to capture the attention of end users, which in turn becomes a target of profiled advertising. It is inherent in the nature of platforms that these subjects will end up violating the neutrality principle. Again, the possibility (effectively achieved in reality) for users to multi-home is what determines the degree of competition between various users: in this respect, recent research on the multiplicity of channels that firms can user to reach end users and evidence of the increasingly cross-platform nature of apps suggest that competition between non-neutral platforms is producing virtuous results for end users[47]. And innovation at the app layer, as already observed, seems to be extremely vital, because of this hybrid form of competition between differentiated platforms. Recent data suggest that 400,000 Europeans are building apps, and that the broader App Economy supported already 1.8 million European jobs in 2013, with a revenue of €17.5 billion that same year, expected to grow by 300% (to €63 billion) by 2018.[48] How can this evidence be reconciled with the claim that platforms are choking innovation?

Third, the platform neutrality debate evidently clashes with a simultaneous trend, i.e. the attribution of greater responsibilities to digital platforms for the conduct of their users.[49] Such trend is visible in several initiatives adopted at the EU level, including the European Commission's plans to review the 2000 e-commerce Directive to modify the 'mere conduit' principle (Article 12) to introduce a 'duty of care' principle, i.e. a requirement for online

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[46] See C. Shapiro and H. Varian (1999), *Information Rules: A Strategic Guide to the Network Economy*, Cambridge, MA: Harvard Business School Press and R. Pardolesi and A. Renda (2002), "How safe is the king's throne? Network externalities on trial", Chapter 11 in R. Pardolesi, A. Cucinotta, R. Van den Bergh (eds), *Post-Chicago Developments in Antitrust Law*, Cheltenham: Edward Elgar.

[47] See P. Nooren, W. Koers, M. Bangma, F. Berkers and M. Boerkers (2014), "Regulation in the Converged Telecom-Media-Internet Value Web". TNO Report R11428, October 2014, the Netherlands.

[48] See "How Europe can win in the global app economy", Euractiv, 3 February 2015 (www.euractiv.com/sections/innovation-enterprise/how-europe-can-win-global-app-economy-311788).

[49] "Europe enlists Internet giants in fight against online extremism", by C. Spillman, 9 October 2014 (http://phys.org/news/2014-10-eu-internet-giants-online-extremism_1.html#inlRlv).

intermediaries to act proactively and remove illegal content hosted on their platforms,[50] the attribution of growing liability to online intermediaries for copyright protection, enforcement of privacy laws (including the 'right to be forgotten'), defamation, spam filtering, notification of security breaches, the fight against terrorism and other monitoring activities. The contradiction lies in the fact that some parts of EU law seem headed in the direction of imposing neutrality obligations on online intermediaries; whereas on the other hand, other legislation is requiring intermediaries to be more proactive in managing, prioritising and editing the content they pass on to the end users. How would this work? Can, for example, search engines be forced to operate 'neutrally' and at the same time be attributed editorial responsibility and related liability? This would amount to saying "you can't control or filter your results, but if anything unlawful comes out of user queries, you'll be responsible". It would also be a new generation (if not an aberration) of the mere conduit principle, in which a company is forced to act as a mere conduit, but is also considered liable for whatever happens in the conduit. Which company would accept to continue operations under these rather tricky terms?

Finally, the platform neutrality principle is in stark contradiction with the objective of media pluralism, which is also being pursued by EU law and is currently subject to a 'fitness check' (or 'REFIT' exercise) in the European Commission, in view of reforms to be adopted in 2016. The problem is similar to the one already outlined for net neutrality in section 1 of this paper, but exacerbated by the scarcity of attention and trust that characterises the provision and consumption of media content. In short, platforms need to select content, and in selecting content polarise the attention of end users on a subset of available information. A neutral search engine would not address media pluralism, since it would simply convey the most popular and relevant results to the end user, and would leave aside the long tail content that otherwise adds to the plurality of voices we would want to see on the Internet. Again, this does not mean that nothing can be done to pursue media pluralism; however, that 'something' that can be done has nothing to do with neutrality. Several scholars, including Gillespie (2010), Helberger (2012), Crawford (2013), Latzer et al. (2014), Sunstein (2009), Zittrain (2014) and Goodman (2014) have fuelled the debate[51] on how to design a proactive media policy in the age of online intermediaries: this debate is inspired by an understandable sense of urgency as regards the need to address the prominent role played today by platforms in conveying news and content to end users. But at the same time, this debate has nothing to do with extremist neutrality positions and rightly recognises that the way to ensure plurality of content exposure (not merely presence) in the age of algorithms is much more complex than simply dictating the neutrality of platforms. The debate is in its early stage, however. Authors like Zukerman (2013) even propose a serendipity engine that brings in random content that might be relevant for the

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[50] See inter alia www.internetsociety.org/sites/default/files/ISOC%20EU%20Newsletter%2027%20March%20201 5%20FINAL.PDF.

[51] See Tarleton L. Gillespie (2010), "The Politics of 'Platforms'", *New Media and Society*, Vol. 12, No. 3 (available at SSRN: http://ssrn.com/abstract=1601487); N. Helberger (2012), "Exposure diversity as a policy goal", *Journal of Media Law*, 4 (1), 65-92. doi: 10.5235/175776312802483880; Latzer et al. (2015), "The Economics of Algorithmic Selection on the Internet", forthcoming in Johannes Bauer and Michael Latzer (eds), *Handbook on the Economics of the Internet*, Cheltenham: Edward Elgar; Sunstein (2009), *On Rumors*, op. cit.; Jonathan Zittrain (2014), "Engineering an Election", *Harvard Law Review Forum*, Vol. 127, and Harvard Public Law Working Paper No. 14-28 (available at SSRN: http://ssrn.com/abstract=2457502); and E.P. Goodman (2014), "Informational justice as the new media pluralism", LSE blog, 19 November (http://blogs.lse.ac.uk/mediapolicyproject/2014/11/19/informational-justice-as-the-new-media-pluralism/).

end user, while Grimmelman (2011) convincingly demonstrates that any filter or algorithmic rule entails an editorial choice.[52] Very recently Grötker (2015) proposed the creation of a public search engine that acts as a benchmark for the results of private engines, but the proposal stops short of explaining how such public engines could be made at least as attractive as the commercial ones.[53]

Summing up, platform neutrality seems to represent a flawed response to a badly defined problem. This does not mean of course that there are no problems to solve: monitoring the way in which platforms make use of their editorial power is the biggest challenge for media policy in the years to come. What I am arguing in this paper is simply that such a challenge will not be addressed by imposing neutrality obligations on platforms, but rather by seeking cooperation with platforms to ensure that the design of their algorithms and their editorial choices are compatible with media pluralism objectives that are considered to be in the public interest.

4. Conclusion

This short paper digs into the roots of the neutrality debate and comes to a number of conclusions, which I hope will be of interest to the reader. They are summarised below.

First, while there might be reasons to impose neutrality at the infrastructure layer of the Internet, these reasons have little to do with the idea that the network should be fully neutral. Rather, they have to do with the ease of implementation, the stability of the infrastructure layer, the possibility of identifying dominant positions and the difficulty of establishing a threshold for the 'material impairment' of the best-effort Internet. At the same time, this policy choice comes with a trade-off: policymakers should recognise that this means diverting incentives to invest in the best-effort Internet towards private networks; and that this might also imply a greater involvement of public funding to secure investment in a high-capacity network. Policymakers should also be open to the possibility that this policy option brings more fragmentation of public and private networks, and the flow of many value-added services into private networks.

Second, whatever outcome the net neutrality debate produces, this will not make the Internet neutral. The juxtaposition of various multi-sided platforms with varying degrees of openness and the use of various forms of traffic acceleration make the Internet non-neutral, inevitably and fortunately. Whether keeping the infrastructure layer neutral would be a way to ensure that the rest of the ecosystem evolves towards open and innovative platforms, rather than to deprive the traffic acceleration market of one category of players, is a matter worthy of further research.

Third, the neutrality debate should not be applied to the higher layers of the Internet. Doing this would fundamentally contradict the economics of the Internet and the evolution of the Internet itself. The fact that the Internet is no longer a place where "nobody knows you're a dog" is an acknowledged fact, and allows no turning back.[54] *A fortiori*, imposing both neutrality and liability all at once on online intermediaries would undesirably place them between a rock

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[52] See Grimmelman, op. cit.

[53] See R. Grötker (2015), "The Citizens' Internet: The Many Threats to Neutrality", Netopia, Brussels, March (www.netopia.eu/wp-content/uploads/2015/04/Netopia-Report-The-Citizens-Internet.pdf).

[54] I refer here to a cartoon authored by Peter Steiner and published in 1993 on the New Yorker. The cartoon showed a pet dog surfing the Internet and enthusiastically telling a fellow dog: "On the Internet, nobody knows you're a dog!"

and a hard place. Rather, the extent to which online intermediaries can cooperate with public authorities to protect and empower online users is the key research and policy question of the future. Both the liability of intermediaries in e-commerce, copyright, data protection and the protection of fundamental rights, and the design of a smarter and proactive media policy represent key challenges and opportunities for EU policymakers in view of a flourishing and creative digital single market.

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