



UNIVERSITY OF LEEDS

This is a repository copy of *Antitrust intent in an age of algorithmic nudging*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/149996/>

Version: Accepted Version

Article:

Zingales, N orcid.org/0000-0001-7717-2247 (2019) Antitrust intent in an age of algorithmic nudging. *Journal of Antitrust Enforcement*, 7 (3). pp. 386-418. ISSN 2050-0688

<https://doi.org/10.1093/jaenfo/jnz010>

© The Author(s) 2019. Published by Oxford University Press. This is an author produced version of a paper published in the *Journal of Antitrust Enforcement*. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Antitrust intent in an age of algorithmic nudging

Nicolo Zingales*

Short abstract

This paper revisits the role of intent for the purposes of establishing an abuse of dominance under EU competition law. It does so by reviewing cases where the outcome hinged on the existence of anticompetitive intent, and eliciting from that a set of guiding principles. The consistency with those principles of the recent decision in *Google Shopping* is then discussed. After a critical examination of the definition of abusive conduct used by the Commission and the extent to which it satisfies the intent requirement in antitrust, the broader implications for providers of algorithmic intermediation services are explored.

Two recommendations are offered to ameliorate the *status quo*. First, courts and competition authorities should only take into account a defendant's subjective state of mind under a "qualified intent" test: a test requiring proof of immediate, substantial and foreseeable anticompetitive effects arising from a purported conduct. Second, to constrain the scope of application of the actionable duty of algorithmic self-scrutiny, regulators should introduce a negligence-based "safe harbor". This safe harbor, mimicking the specialized regime of intermediary liability for information society service providers, would enable continued investment and innovation in algorithmic services while also promoting adherence to cross-industry best practices in algorithmic design.

1. Introduction: understanding the notion of intent in antitrust analysis

What value, if any, should a court or competition authority give to incriminating emails or documents indicating a defendant's anticompetitive intentions? The role of subjective intent in antitrust analysis remains a controversial topic, having been at the center of discussions by numerous commentators- especially in Europe and the United States.¹ Those in favor of a greater consideration of intent evidence argue that it constitutes an invaluable tool in the antitrust arsenal, allowing agencies and litigants to overcome situations where facts are ambiguous² or the evidence of harm to competition inconclusive.³ A further argument, advanced especially by US commentators, is that with antitrust analysis increasingly relying on effects and facing challenges in proving harm to innovation, ruling out intent evidence is likely to generate a significant amount of false negatives.⁴

* Lecturer in Competition and Information Law, University of Sussex. Comments welcome at N.Zingales@sussex.ac.uk.

¹ See e.g. Frank Easterbrook, 'Monopolization: Past, Present and Future', 61 *Antitrust Law Journal* 99 (1992); Herbert Hovenkamp, 'The Monopolization Offense', 61 *Ohio State Law Journal* 1035 (2000); Ronald A. Cass and Keith N. Hylton, 'Antitrust Intent', 74 *Southern California Law Review* (2001), 657; Marina Lao, 'Reclaiming a Role for Intent Evidence in Monopolization Analysis', 54 *American University Law Review* (2004) 151; Geoffrey A. Manne and E. Marcellus Williamson, 'Hot Docs vs. Cold Economics: The Use and Misuse of Business Documents in Antitrust Enforcement and Adjudication', 47 *Arizona Law Review* 609 (2005); Antonio Bavasso, 'The Role of Intent under Article 82 EC: From "Flushing the Turkeys" to "Spotting Lionesses in Regent Park"', *European Competition Law Review* 616 (2005); Maria João Melicias, 'The Use and Abuse of Intent Evidence in Antitrust Analysis', 33 *World Competition* 569 (2010); Maurice E. Stucke, 'Is Intent Relevant?' *Journal of Law, Economics and Policy* 801 (2012); Colm O'Grady, 'The Role of Exclusionary Intent in the Enforcement of Article 102 TFEU', *World Competition* 37, no. 4 (2014): 459–486; Pinar Akman, 'The Role of Intent in the EU Case Law on Abuse of Dominance', 39 *European Law Review* 316 (2014); Pinar Akman, 'The tests of illegality under Articles 101 and 102', 61 (1) *The Antitrust Bulletin* (2016), 84-104. Pier Luigi Parcu and Maria Luisa Stasi, 'The role of intent in the assessment of conduct under Article 102 TFEU', in Pier Luigi Parcu, Giorgio Monti and Marco Botta (eds.), *Abuse of Dominance in EU Competition Law* (Edward Elgar, 2017).

² See e.g. Stucke, *supra* n. 1, 852.

³ See e.g. Lao, *supra* n. 1, 156.

⁴ The extent to which this insight is applicable in the EU, which presents a different legal provision and a different enforcement model, is rather underexplored. While this paper is not aimed to address this question, the implications of the conclusions reached here about the proper use of intent in Article 102 cases may be taken as useful departure point for that discussion.

On the other side of the fence sit those opposing a reliance on intent evidence for two reasons. First and foremost, “sales talks” to the company’s employees encouraging them to beat and indeed eliminate competitors are indicative of an aggressive business strategy, which may or may not be anticompetitive in the first place.⁵ Second, banning any exhortation to compete aggressively would encourage firms to deploy more subtle forms of inducement, and thereby favor those who have the resources to master that complexification effectively. On that ground, intent evidence has been said to lack objectivity and reliability, as potentially both over-inclusive and under-inclusive⁶.

This criticism is well taken in a world where the requisite culpability can be grounded on *any* evidence documenting the defendant’s state of mind when undertaking a certain act. In that world, subjective intent can be a slippery slope, as it might lead a court or competition authority to believe that the defendant engaged in anticompetitive conduct even where the anticompetitive outcome was in fact either impossible or highly unlikely to materialize given the circumstances.⁷ However, it is submitted that this is not the world in which EU antitrust enforcement operates.⁸ A close reading of some of the case-law of the European Court of Justice (CJEU) suggests that the notion of subjective intent can only be validly relied upon where, on net balance of the whole body of evidence, there is sufficient likelihood for the defendant’s projected conduct to lead to anticompetitive effects. In other words, that notion must be integrated with an objective component, which relates to the closeness of the connection between the subjective state and the anticompetitive outcome.

⁵ Putting it in Richard Posner’s words: “it is the essence of the competitive process that all firms, including dominant ones, seek to prevail over their competitors on – and force them off – the market”. See *Olympia Equip. Leasing Co. v. Western Union Tel. Co.*, 797 F.2d 370, 373 (7th Cir. 1986). See also Judge Easterbrook’s opinion in *A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc.*, 881 F.2d 1396, 1401-03 (7th Cir. 1989).

⁶ Using Posner’s words once again: “In most situations eliminatory intent, notably, when inferred from documentary evidence, may lead to legal errors for its arbitrariness, that is, because it may be over-inclusive, since it may be too easy to find. Depending on the degree of legal sophistication of the concerned undertakings it may also be under-inclusive, since it can be too easy to hide”. Richard Posner, *Antitrust Law*, 2014 (Chicago Press 2001).

⁷ Say, for instance, finding relevant a clear intent to engage in predatory pricing to undercut competitor A when the predator is unaware of the existence of a more efficient competitor B, who will outlive predation and gain market share to the expense of both the predator and competitor A. Or a selective price cut directed at the wrong target.

⁸ This can be contrasted with the legal framework under US law, where conduct can fall foul of antitrust roles even in inchoate form (as conspiracy or attempt to monopolize).

This resonates with the well-settled principle that “abuse of dominance is an *objective concept* relating to the behavior of a dominant undertaking which is such as to influence the structure of a market where, as a result of the very presence of that undertaking, the degree of competition is weakened and which, through recourse to methods different from those which condition normal competition, has the *effect* of hindering the maintenance of the degree of remaining competition or the growth of that competition”.⁹

To fully appreciate this point, a clarification is needed to distinguish between the subjective type of intent (i.e., evidence of a defendant’s state of mind) that we have discussed so far, and the objective intent to engage in anticompetitive conduct. Specifically, it is important to bear in mind the latter indicates the intent attributed to a dominant firm *by way of inference* from business decisions it made. Much of the case-law is confusing in this regard, as it fails properly differentiate between these two notions in referring almost invariably to “intent” or “intention”, “objective”, “strategy”, and “purpose” or “aim” in lieu of using the subjective/objective dichotomy. However, that difference is crucial in determining how culpability is established. While in both cases there may be an inference process at some level of abstraction, objective intent is a legal construct which prescind from the existence of any form of volitional expression altogether. Objective intent is focused on the *presumed* state of mind of a reasonable person (rather than the defendant specifically) in committing a particular act or omission. It is obtained through an inductive process which is typically based on an ideal notion of *homo economicus*,¹⁰ as illustrated by widely deployed unilateral conduct tests such as the “no-economic sense”, the “profit-sacrifice” and the “as-efficient competitor” test.¹¹

⁹ Case 85/76 *Hoffmann-La Roche & Co AG v. EC Commission*, ECR 461(1979), para. 91 (emphasis added).

¹⁰ This is generally the case for competition law; however, the broader reference is one of an analogy between ourselves and others on the basis of experience, which has been called “homo psychologicus”. See Jeoren Blomsma, *Mens rea and defences in criminal law* (Intersentia 2012), 57.

¹¹ See in this regard Unilateral Conduct Working Group, ‘Objectives and Principles of Unilateral Conduct Laws’, International Competition Network (2012), at <http://www.internationalcompetitionnetwork.org/uploads/library/doc827.pdf>; see also Erik Osterud, *Identifying Exclusionary Abuses by Dominant Undertakings under EU Competition Law: the Spectrum of Tests* (Kluwer Law 2010).

Note that objective intent is fundamentally different from so called “indirect” or “oblique” intent (also known as “*dolus indirectus*”), which is when a person not only intends a particular consequence of their act, but also an additional consequence which is virtually certain to follow that act.¹² It also differs significantly from the so called “intention on possibility” (or “*dolus eventualis*”), which means appreciating and accepting the considerable chance that a certain consequence may materialize. That being said, as a practical matter, objective intent will often overlap with *dolus indirectus* or *dolus eventualis*; this is particularly the case when the accepted consequence reasonably follows from economic logic. The key difference is that in the case of *dolus indirectus* and *dolus eventualis* the inquiry is subjective (into the mind of the person in question), while in the other it is purely objective (into the mind of a reasonable person). Thus, the subjective/objective nature of the inquiry marks a key difference between subjective and objective intent. For convenience, I will distinguish between “intent” as the general subjective element denoting culpability for an offense (known in common law systems as “*mens rea*”), and “intention” as the more specific type of culpability which is attributed following an inquiry into a defendant’s mind.¹³ In other words, “intention” will be used to refer specifically to subjective intent, while “intent” will be used more generally to include cases of negligence, which depend on a more objective type of intent.¹⁴

The rest of this paper is structured as follows: section 2 reviews the relevant cases in EU competition law and thereby illustrates the difference and interplay between different types of intent, and the closely related distinction between subjective and objective evidence. In section 3, attention is placed on the recent EU Commission decision in *Google Shopping*, to examine the role played by subjective and objective intent in the Commission’s assessment, and attempting to reconcile the decision with previous case-law. Section 4 offers a possible solution to safeguard against overstretching of the role of intent, with

¹² *R v Woollin* [1999] 1 A.C. 82; [1998] 3 W.L.R. 382; [1998] 4 All E.R. 103

¹³ See in this sense the work of Anthony Duff, summarized by John Gardner and Heike Jung, ‘Making Sense of *Mens Rea*: Antony Duff’s Account’ 11 (4) *Oxford Journal of Legal Studies* (1991) 559-588.

¹⁴ Despite the characterization of negligence as a type of liability, for instance, the German system sees it as a type of intent, although with an objective element (*Tatbestand*). See Michael Bohlander, *Principles of German Criminal Law* (Hart Publishing 2008), pp. 59-60.

particular regard for situations in which undertakings may assume liability for their own algorithmic design choices. Finally, section 5 briefly summarizes and concludes.

2. Exploring the role of intent in art 102 TFEU

2.1 Constitutive element?

Construing the place for intent in Article 102 of the Treaty on the Functioning of the European Unions (TFEU) from the existing law is far from a straightforward. For starters, the textual basis contains no explicit reference to any subjective element in Article 102 TFEU. The article literally refers to *any* abuse “by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States”. While intent could technically still be read into the word “abuse”, that interpretation clashes with the common interpretation of the CJEU’s oft-cited *obiter dictum* in *Hoffman-La Roche*: that abuse is an “objective concept”, meaning that subjective state of mind is not a requisite for the establishment of an abuse. However, for purposes of the present discussion, it is interesting to note that the statement made by the Court in that case did not deal with subjective intent. Rather, the Court was concerned with distinguishing between the *active or passive* nature of the undertaking’s conduct, rejecting the centrality (but not the relevance altogether) of such nature of intent in the establishment of an abuse. More specifically, the famous quote from *Hoffman-La Roche* about the *objective* nature of abuse was made in the context of rejecting the defendant’s interpretation that an abuse according to Article 102 TFEU implies that “the use of the economic power bestowed by a dominant position is the means whereby the abuse has been brought about”,¹⁵ rather than with the dominant firm’s *intention* to exclude rivals or harm consumers.

¹⁵ *Hoffman La Roche*, supra note 9, paras. 90- 91. A close reading of paragraph 91 seems to suggest that the free will of consumers in a particular transaction could be trumped by the ability of the dominant firm to influence the structure of the market in a way that constrains consumers more generally.

Of course, this does not mean that objectivity *cannot* be interpreted to exclude the consideration of *certain* elements relating to the subjective state of mind of the defendant¹⁶, at least as a constitutive element of the abuse. But that is a step further, which was not made in *Hoffman-La Roche*. The implications of objectivity on the relevance of a defendant's state of mind were somewhat better explained in *Continental Can*, where the Court held that "abuse" does not imply the existence of fault in the sense of a failure in propriety or morality: in other words, negligence suffices.¹⁷ However the example provided by the Court in that instance, referring to the takeover that it had deemed abusive, was focused not on the intention of the acquirer, but rather on the fairness of the price paid to the acquiree's shareholders. Fairness was not a relevant consideration, the Court explained, as the real problem was that Continental Can had through the takeover practically eliminated competition which existed, or was at least possible, on the concerned products. Hence, the takeaway from that ruling was that there is no need to prove an intention to harm competition, *if* that harm is indeed the practical result of the conduct.

One should not take this concept too far, however. A broad interpretation of the holding in *Continental Can* in the sense that *intent* to harm competition is unnecessary for the establishment of a violation under Article 102 would, if applied in connection with the imposition of a fine, raise serious due process concerns. To be sure, Article 23 (2) of Regulation 1/2003 clearly indicates the need to establish intention or negligence in order to impose a fine on an undertaking. This point is particularly important considering the recognition by the European Court of Human Rights that competition fines are criminal in nature (despite their qualification as "administrative" under EU law), and therefore trigger the application of the guarantees set out by Article 6 ECHR in relation to the right to be heard, including the presumption of innocence (enshrined also in Article 48 of the EU Charter of Fundamental Rights).¹⁸ The Court has also explicitly recognized the application of the principle of legality reflected in Article 7 ECHR (also known as "*nullum crimen*,

¹⁶ Or, as illustrated in *France Telecom* (*infra*, section 2.2.), of factors that are inherently subjective.

¹⁷ Case 6-72, *Europemballage Corporation and Continental Can Company Inc. v Commission of the European Communities*, ECLI:EU:C:1973:22.

¹⁸ *A. Menarini Diagnostics S.R.L. v. Italy*, no. 43509/08, 27 September 2011, para. 42.

nulla poena sin lege”) in competition cases,¹⁹ affirming that where EU legislation imposes or permits the imposition of penalties, it must be clear and precise so that the persons concerned may know without ambiguity what rights and obligations flow from it and may take steps accordingly. This implies that both knowledge (actual or constructive) and control over one’s anticompetitive conduct must be established before a fine can be imposed.

Yet it is arguable that the role of intent in Article 102 cases goes beyond the (admittedly broad) set of cases in which a penalty is imposed: the mere establishment of a violation presupposes the finding of some form of intent. Despite the absence of any explicit reference to it in the treaty and in the cases mentioned so far, a general intent to commit an act can be evinced from the definition of abuse given in *Hoffman-La Roche*, referring to “*recourse* to methods different from those which condition normal competition”.²⁰ A literal interpretation of this term suggests that it would be incorrect to conclude that a dominant undertaking is liable for conduct which is merely accidental and does not result from a breach of the undertaking’s duty of care. For instance, an undertaking should not be liable for the anticompetitive act of one of its employees if it can prove that the event was a result of a clerical mistake, or the malfunctioning of a computer system, that it could not have reasonably prevented or remedied. Put it another way, intent cannot be imputed for an event that is an unlikely consequence of an act, and which would have been unreasonable for an undertaking to consider. In such cases, neither subjective nor objective intent could be established. In this sense, the Court’s reference in *Continental Can* to a “practical result” to harm competition should be interpreted to mean that no proof of intention to harm competition is needed insofar as that result is a *likely and foreseeable* consequence of conduct which could have practically been addressed by the undertaking.

¹⁹ Joined Cases C-189/02 P, C-202/02 P, C-205/02 P to C-208/02 P and C-213/02 P *Dansk Rørindustri and Others v Commission* [2005] ECR I-5425, paras. 215-223.

²⁰ According to the Oxford dictionary, “recourse to” refers to the “the use of someone or something as a source of help in a difficult situation”. The version in the original language (German) uses “*durche die Verwendung*”, which can be translated with the less purposive phrasing of “through the utilization”, or simply “by using”. Whatever version is picked however, the concept indicates a preordinate act to utilize certain methods of competition: not necessarily in the sense that it forms part of a competitive strategy, but at least meaning that it was not carried out under duress or by mistake, which distort the defendant’s real intention.

This reading is consistent with the evolution of corporate criminal liability, which has in recent years overcome the enforcement gaps intrinsic in the theories of “identification” (holding that a firm’s intent corresponds to that of its managers) and “collective knowledge” (holding that a firm’s knowledge is the sum of the knowledge of its employees) by embracing an organizational model of culpability, i.e. establishing fault for failure to adopt adequate organizational measures to prevent the effects giving rise to the illegality.²¹ The Court has explicitly moved in that direction in EU competition law when it comes to the liability of an undertaking for the conduct of an independent contractor. First, it has long recognized that, where anticompetitive conduct is attributable to a person authorized to act on behalf of the undertaking, it is not necessary for there to have been action by, or even knowledge on the part of, the partners or principal managers of the undertaking concerned.²² Secondly, in the specific context of actions by independent contractors infringing Article 101, the Court has ruled that liability may attach not only when the service provider was in fact acting under the direction or control of the undertaking concerned, but also when the undertaking was aware of the anti-competitive objectives pursued by its competitors and the service provider, and intended to contribute to them by its own conduct. Or alternatively, in an even broader scope of application, where the undertaking could reasonably have foreseen the anti-competitive acts of its competitors and the service provider, and was prepared to accept the risk which that entailed.²³ While the Court has not had the opportunity to rule on the applicability of this organizational model in the context of Article 102, it has more generally held that the condition of existence of intention or negligence is satisfied if the undertaking concerned “cannot be unaware of the anti-competitive nature of its conduct, whether or not it is aware that it is infringing the competition rules”.²⁴ From that, it is reasonable to assume that organizational measures will be even more important in the unilateral conduct context, as there is no need to predict competitors’ actions in order to determine one’s own conduct. A solid set of

²¹ Cristina de Maglie, ‘Models of Corporate Criminal Liability in Comparative Law’ 4 (3) Washington University Global Studies Law Review (2005).

²² Joined cases 100/80 to 103/80, *Musique Diffusion française and Others v Commission* EU:C:1983:158, para. 97.

²³ C-542/14, *SIA ‘VM Remonts’ (formerly SIA ‘DIV un KO’) and Others v Konkurences padomem* ECLI:EU:C:2016:578, para. 33.

²⁴ C-280/08 P, *Deutsche Telekom v Commission* EU:C:2010:603, para 124; C-295/12 P, *Telefonica v Commission* EU:C:2014:2062, para 156.

organizational measures (including, for example, a compliance program) should be sufficient for a dominant undertaking to escape liability.

Another corollary of the dependence of an abuse on an intent-based notion of “recourse to methods different from those which condition normal competition” is that it should not be an abuse for a dominant company to engage in conduct that is in line with methods applied in conditions of “normal competition”. That is, normal competition is a defense even where such company carries out the conduct with the (professed or implicit) intention to drive its competitors out of the market. This is because in order to be successful a plaintiff would need to show a causal link between an act or omission by the undertaking and a (possible) anticompetitive effect; however, that link is presumed to be lacking in cases of methods of operation conforming to that abstract notion of “normal competition”.²⁵ It goes without saying that such defense does not offer real prospects of success until the EU adjudicature provides an affirmative indication of the boundaries to “normal competition” or “competition on the merits”, but that discussion goes beyond the scope of this contribution.²⁶

2.2. A typology of intent usage: disambiguation v. corroboration

So far we have only seen early judgments addressing intent negatively, i.e. to (explicitly or implicitly) negate the relevance of intent. However, more recent cases identify two possible roles of intent as relevant consideration for the establishment of a violation of Article 102 TFEU. The case of *AKZO*²⁷ laid out the distinction rather clearly. Confronted with the need to distinguish between legitimate and anticompetitive below-cost pricing of the products (vitamins) sold by AKZO to the customers of a competitor (ECS), the Court accepted the Commission’s distinction between two different scenarios. The first is where the exclusionary consequences of a price-cutting campaign by a dominant producer are so self-evident that no evidence of intention to eliminate a competitor is necessary. The second is

²⁵ Note that this is quite apart from the need to show a direct link of causality between a dominant position and an alleged abuse (for example, implying that the abuse must occur in the same market where dominance exists), which was explicitly rejected both in *Continental Can* and in *Hoffman La Roche*.

²⁶ Along these lines, see Akman, ‘The illegality tests’ supra n. 1.

²⁷ Case C-62/86, *Akzo Chemie BV v Commission* ECLI:EU:C:1991:286.

where the low pricing could be susceptible of several explanations, which may render it necessary to prove the existence of an intention to eliminate a competitor or restrict competition. In cases involving the second scenario, intent (be it subjective or objective) serves to separate the wheat from the chaff, i.e. to clarify the purpose of a conduct that displays ambiguous welfare effects. In the former hypothesis, proving intent is not *necessary*, although it may be useful additional evidence to support the establishment of a violation.

The Court then famously operationalized those principles by crafting a presumption of predation for prices below average total costs, while requiring proof of a plan to eliminate a competitor for cases where prices are between average variable costs and average total costs. It then sought to prove the existence of an intention to eliminate ECS by pointing to an internal document prepared by one of AKZO's representatives showing that prices offered to one specific customer (Allied Mills) in January 1981 were established by calculating that they were "well below" those charged to it by ECS. In the eyes of the Court, this showed that AKZO's intention was not solely to win the order, as otherwise it would have simply reduced its prices to the (lesser) extent necessary for that purpose, and not by such greater margin. Furthermore, this was to be seen in the context of prior meetings between AKZO and ECS where AKZO threatened to sell flour additives below its production costs if ECS continued to sell benzoyl peroxide. This spurred the ECS to apply for an injunction before the London High Court to prohibit AKZO from implementing the threats. In that light, the Court considered that by quoting to Allied Mills prices that were calculated on the basis of those offered by ECS to a similar customer, AKZO revealed an *aim* to set its prices at the lowest level possible without infringing the commitment made to the London High Court (that is, well below ECS's costs but above AKZO's average total costs).²⁸ In other words, documentary evidence was indicative of a subjective intent not simply to maximize profits, but actually (given AKZO's likely awareness of the consequences of their price-cutting)²⁹ to eliminate ECS as a competitor from the market.

²⁸ *Id.*, para. 102.

²⁹ Note that this likely awareness, based on general experience, does not turn the intent in question from subjective into objective: it concerns knowledge and acceptance of the consequence of an intended action, rather than the presumed intention (negligence) in connection with a conduct displayed in the market.

A similar situation presented itself in *Tetra Pak II*³⁰, another case concerning predation where the Commission sought to prove what it called “eliminator intent” to corroborate the finding that prices below average total costs amounted to predation. Here, the Court of First Instance (CFI) placed importance on the magnitude of the differences of prices of Tetra Rex cartons in Italy compared to other Member States (20 to 50%), which gave rise to a presumption of the existence of a predatory plan. Furthermore, the Court found that presumption was consistent with the content of the reports of Tetra Pak Italiana's board of directors of 1979 and 1980, which referred to the need to make major financial sacrifices in the area of prices and supply terms in order to fight competition (in particular, from the target of the predation in question –Pure Pak).³¹ This case thus stands as an illustration of the fact that subjective and objective intent may be used in parallel, reinforcing each other's value. Obviously, the theoretical danger with parallel application is that of improper conflation: it would be problematic if antitrust analysis extrapolated an intent to eliminate competition from an utterance by a company's manager or even a non-qualified employee, if the evidence clearly suggests that the company's conduct is justified or even pro-competitive.³² This risk of confusion should in principle be minimized by the duty of the EU institutions to look at the evidence as a whole³³ and sustain only a finding of illegality based on a firm, precise and consistent body of evidence.³⁴ Nevertheless, the mere existence of this risk highlights the opportunity and need for rationalization of key principles.

Another judgment that discussed intent as a criterion of disambiguation with precompetitive conduct was the CFI's *Compagnie Maritime Belge*³⁵. This case concerned a joint dominant position by *Compagnie Maritime Belge* and other members of a liner conference who had put in place a series of practices of selective price-cutting (known as

³⁰ Case T-83/91, *Tetra Pak v Commission* [1994] ECR II-00755.

³¹ *Id.*, para. 151.

³² Manne, *supra* n. 1, 652-654.

³³ Case C-637/13 P, *Laufen Austria AG v European Commission* ECLI:EU:C:2017:51, para. 68.

³⁴ Joined cases C-89/85, C-104/85, C-114/85, C-116/85, C-117/85, C-125/85, C-126/85, C-127/85, C-128/85 and C-129/85, *A. Ahlström Osakeyhtiö and others v Commission* [1993] ECR I-01307, para. 127.

³⁵ Cases T-24/93 to T-26/93 and T-28/93 *Compagnie Maritime Belge Transports and Others v Commission* [1996] ECR II-1201.

“fighting ships”) deemed by the Commission to be indicative of a plan to eliminate a particular competitor (G&C). In the words of the CJEU, this is because where a liner conference in a dominant position selectively cuts its prices in order deliberately to match those of a competitor, it derives the dual benefit of eliminating a competitor in the liner shipping market and continue to charge high prices for the services not threatened by competition.³⁶ Arguably in recognition of the fact that the conduct in question did not neatly fit into any of the typified abuses, the Commission went out of its way to show the existence of anticompetitive intent. However, it did not simply rely on objective intent established from evidence of a price-matching pattern: it relied on references in internal documents to “getting rid” of the independent shipping operation, as well as the use of the term “fighting ships” that was understood in the industry to define that particular kind of practice. On appeal of the Commission’s decision, the CFI approved the evidence on all counts, and rejected the relevance of the data presented by the defendant that G&C’s market share had actually increased during the period of the alleged practice. It argued that “where one or more undertakings in a dominant position actually implement a practice whose aim is to remove a competitor, the fact that the result sought is not achieved is not enough to avoid the practice being characterized as an abuse”.³⁷ The Court did not provide any circumstantiation to that statement, which is unfortunate given the risk of it becoming a slippery slope for the use of intent. Even if we were to accept the concept of an abuse “by object”, it remains crucial to ensure that, much like in the case of Article 101, such category identifies a specific set of practices whose harmful nature is proven and easily identifiable in the light of experience and economics.³⁸ Regrettably, this sweeping characterization of “by object” abuse was not rectified as the CJEU upheld the judgment in its substantive part.³⁹

³⁶ C-395/96 P and 396/96 P, *Compagnie Maritime Belge Transport and Others v Commission* [ECR] I-1365, para. 117.

³⁷ *Id.*, para. 149. See also a similar statement made by the General Court in Case T-230/01, *Manufacture Francaise des Pneumatiques Michelin v Commission* [2003] ECR II-4071, para. 241; and in T-228/97, *Irish Sugar plc v Commission* [1999] ECR II-2969, para. 270.

³⁸ See Opinion of Advocate General Wahl in Case C-67/13 P, *Groupement des cartes bancaires (CB) v European Commission* ECLI:EU:C:2014:1958, para. 56.

³⁹ Joined cases C-395 to 396/96, *Compagnie maritime belge transports and Others v Commission of the European Communities* [2000] ECR I-01365.

*France Telecom*⁴⁰ is perhaps the most controversial judgment in this area, and the one with the most confusing use of the word “intent”. Once again, it was a case of predation in circumstances in which it was necessary to prove an overall plan to eliminate the competitor (objective intent), as a second step of the test set out in *AKZO*. The claim by France Telecom on appeal before the CJEU was that the CFI had only relied on *subjective* factors to deem the anticompetitive plan proven; and this would be contrary to the requirements of the case-law to use *objective* indications, such as threats to competitors or selective price cuts in respect of competitors’ customers. In other words, France Telecom evoked the application of the factors used in *AKZO* and *Tetra Pak II* as a manifestation of the requirement of proving intent through objective means. The Commission disputed that theory. The Court quickly dismissed the claim, but accepted France Telecom’s reading of the case-law to the effect that an anticompetitive plan must be proven on the basis of “objective factors”.⁴¹ In principle, one could take this to confirm the necessity of combining a subjective and an objective component in proving intent. However, the Court referred to the undertaking’s internal documents as an example of an objective factor from which eliminatory intent can be deduced, despite the disputed meaning of the words contained in the document.⁴² This suggests that there might be a difference between *direct* evidence,⁴³ which proves the incriminated conduct without need for further evidence or inferences, and evidence that is *objective* (or based on objective factors), which admits the use of reasonable inferences on the basis of rules of general experience.⁴⁴ It should also be noted that in approving the requirement to use “objective factors” and failing to address the Commission’s argument that the element of *intention* in abuse of dominant position is “necessarily subjective”,⁴⁵ the judgment left some confusion as to the relationship between subjective factors and subjective intent.

⁴⁰ C-202/07 P, *France Télécom SA v Commission of the European Communities* [2009] ECR I-02369.

⁴¹ *Id.*, para. 97.

⁴² *Id.*, para. 98.

⁴³ According to authoritative sources, the General Court tends to use the expression ‘direct evidence’ when it refers to contemporaneous notes which clearly demonstrate the fact in question, but the use of this term in evidence literature is broader. See Fernando Castillo De La Torre and Eric Gippini Fournier, *Evidence, Proof and Judicial Review in Competition Law* (Edward Elgar 2017), 163; cf. Andrew Choo, *Evidence* (5th ed., Oxford University press 2018).

⁴⁴ See Opinion of AG Kokott on 19 February 2009, Case C-8/08, *T-Mobile Netherlands and Others* [2009] ECR I-4529.

⁴⁵ *Id.*, para. 96.

An examination of the CFI judgment reveals that the root of confusion was the interpretation of the concept of “*pre-emption* of the ADSL market” found in France Telecom’s internal document. The Court treated the verb as indicative of a plan to predate when considering it in combination with additional evidence, namely France Telecom’s internal documents indicating knowledge that

- (1) its non-profitable pricing combined with high sales volumes was not economically sustainable for competitors;⁴⁶
- (2) the impossibility of matching retail prices while also staying profitable prevented AOL’s entry on the high-speed market;⁴⁷ and
- (3) France Telecom enjoyed specific advantages as market leader”.⁴⁸

The judgment gives short drift to the defendant’s allegation that the documents concerned would merely contain “spontaneous, informal, even unconsidered words” that reflected the dialectic of the internal decision-making process.⁴⁹ One remains wondering whether those types of allegations would be sufficient, if accepted, to cast doubt on the objectivity of the evidence produced. Unfortunately, those nuances were not picked up in the final ruling by the CJEU, which simply defined the undertaking’s internal documents as “objective factors”.⁵⁰ In doing so, the Court failed to trace the dividing line between subjective and objective evidence.

It is also worth noting that the reason why the judgment places emphasis on subjective intent, without a correlative enquiry as to the existence of an objective component, is that it had already been established that the defendant’s pricing was between average variable costs and average total costs. This is a particular situation that under EU competition law triggers a purpose, rather than effect, inquiry.⁵¹ It is a narrow situation of purpose-based

⁴⁶ Case T- 340/03, *France Telecom v Commission* [2007] ECR II-00107, para. 210.

⁴⁷ *Id.*, para. 212.

⁴⁸ *Id.*, para. 213.

⁴⁹ *Id.*, para. 201.

⁵⁰ Case C-202/07 P, *France Télécom*, supra n.40, para. 98.

⁵¹ In the words of the Court: “[...] although the fact that an undertaking is in a dominant position cannot deprive it of the right to protect its own commercial interests if they are attacked and such an undertaking must be allowed the right to take such reasonable steps as it deems appropriate to protect those interests, it is

abuse which, unlike the one identified in *Compagnie Maritime Belge*, is based on a clearly defined set of circumstances rendering harm to competition sufficiently likely. In other words, this is a specific area where the law has formally (and dispositively) recognized the disambiguating role of intent evidence.

2.3. Link to special responsibility

The final piece of the puzzle with regard to the role of intent in the case-law on Article 102 TFEU is the General Court's judgment in *Astra Zeneca*.⁵² This judgment markedly differs from previous cases for the type of reasoning followed to establish anticompetitive intent, which was linked to the defendant's failure to meet the expectations of fairness and transparency placed on a dominant firm (in particular, in dealing with regulatory authorities). The conduct in issue was the provision of misleading information by Astra Zeneca to regulatory authorities for the issuing of Supplementary Protection Certificates to which it was in fact not entitled to, or was only entitled to for a limited period. The Commission found that Astra Zeneca had abused its dominant position in various national markets for prescribed proton pump inhibitors by making deliberate misrepresentations to patent attorneys, national courts and patent offices in order to obtain the Supplementary Protection Certificates for its medicine (omeprazole). Astra Zeneca on its part contended that there was no bad faith in those misrepresentations, which concerned the date of authorization of its medicine, as it legitimately relied on the theory of "effective marketing authorization" date (relating to the regulatory approval of the prices for sale on the market) instead of referring to the date of the technical authorization of the medicine. Yet its main legal argument was that the Commission must rely on objective factors in the definition of intent, arguing that the Court's case-law indicates that abuse is an objective concept which does not depend upon subjective intention to cause harm to competition or evidence of conduct preparatory to an abuse. It instead requires an objective ascertainment of conduct which is in fact capable of restricting competition within the meaning of Article 102.⁵³ It

not possible, however, to countenance such behaviour if its actual purpose is to strengthen that dominant position and abuse it". *Id.*, para. 46.

⁵² Case T-321/05, *AstraZeneca AB and AstraZeneca plc v European Commission* [2010] ECR II-02805.

⁵³ *Id.*, para. 309 and 318.

alleged that the Commission's case rested upon a series of insufficiently founded allegations, selective references to documentary evidence, tenuous inferences and insinuations which, even taken together, do not amount to clear and convincing proof⁵⁴ (for instance, the use of different date for its applications for a Supplementary Protection Certificate in different Member States).⁵⁵

The Court did not reject Astra Zeneca's interpretation of objectivity, reiterating that proof of the deliberate nature of the conduct and of the bad faith of the undertaking in a dominant position is not required for the purposes of identifying an abuse of a dominant position.⁵⁶ However, it also pointed out that this does not lead to the conclusion that intention to resort to practices falling outside the scope of competition on the merits is in all events irrelevant.⁵⁷ In accepting that the qualification of a given conduct as abusive (in this case the misleading nature of representations made to public authorities) must be assessed on the basis of objective factors,⁵⁸ it stressed that legality of the defendant's conduct depended on whether, in the light of the context in which the practice in question has been implemented, that practice was such as to lead the public authorities wrongly to create regulatory obstacles to competition.⁵⁹ Note that this confirms the interpretation that has been advanced so far, that subjective intent (here, an intention to mislead) is only relevant to the extent that the agent is likely to achieve the desired outcome.

The Court then solved the dispute by reaching for the concept of special responsibility not to impair genuine undistorted competition: the manifest lack of transparency over factors that were material for the regulatory assessment constituted a breach of that responsibility. , as well as its interpretation justifying reference to the "effective marketing" authorization instead of the technical authorization.⁶⁰ In particular the Court had regard to Astra Zeneca's failure to disclose all the relevant dates for the purposes of issuing the certificates. Despite

⁵⁴ *Id.*, para. 384.

⁵⁵ *Id.*, paras. 488, 490 and 493.

⁵⁶ *Id.*, para. 356.

⁵⁷ *Id.*, para. 359.

⁵⁸ *Id.*, para. 356.

⁵⁹ *Id.*, para. 357.

⁶⁰ *Id.*, para. 496.

a lively discussion between parties as to whether such conduct can be punished under a negligence standard or requires a specific intention to commit fraud, the Court did not address that question squarely. However, it clearly evoked the concept of negligence-based duty of care when it referred to the dominant undertaking's duty to "at the very least inform the public authorities of any error in its communications with them" as a consequence of the undertaking's "special responsibility not to impair, by methods falling outside the scope of competition on the merits, genuine undistorted competition in the common market".⁶¹

This ruling constitutes an important brick in the edifice of intent in Article 102 cases by illustrating that the concept of special responsibility triggers a general duty of care, upon which objective intent can be inferred. In taking this approach, the judgment dispenses with the need to determine whether the evidence adduced by the Commission to prove subjective intent was based on sufficiently "objective factors", and leaves once again to posterity (after *France Telecom*) the question as to how "subjective" and "objective" ought to be distinguished. While the defendant seemingly provided good examples of "subjective" factors when pointing to the use of "selective and out of context references, tenuous inferences and insinuations", it remains to be seen whether the CJEU would second that view (as on the appeal it did not rule on this particular point).

2.4 Intent in the Guidance Paper

Having illustrated so far that the case-law of the CJEU requires the existence of an objective element as constitutive part of subjective intent, it is worth noting that the European Commission's Guidance Paper⁶² contains no acknowledgment in this sense. This has notable consequences on future enforcement, in that the Commission as well as any court or competition authority relying on the Paper should handle its guidelines with caution. Those guidelines specifically say at paragraph 20 that "intent can be proven by *direct* evidence of a strategy to exclude competitors, such as a detailed plan to engage in certain conduct in order to exclude a competitor, to prevent entry or to pre-empt the

⁶¹ *Id.*, para. 358.

⁶² European Commission, 'Guidance on its enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings' OJ C 45, 24.2.2009, 7–20.

emergence of a market, or other evidence of concrete threats of exclusionary action”⁶³. Note that this formulation incorporates the wording that had been subject to controversy in *France Telecom*, so that there will be no questions for the Commission that “pre-empting” belongs to the category of acts directly prohibited by Article 102 (and thus no inference is needed once it is proven to be the conduct to which a subjective intent can be attributed).

Two additional points can be made in that regard. On the one hand, the Commission’s focus on direct evidence appears to limit its ability to make inferences about intention, which reduces the risk of stretching this notion too far.⁶⁴The importance of this change remains limited, however, in the absence of a clarification on the distinction between direct and indirect evidence. The *France Telecom* example shows that the distinction between these types of evidences is far from clear, which suggests that a national court following its own rules of evidence might construe “direct” narrowly and potentially lead to divergence and a significant amount of type II errors (false negatives).

On the other hand, the following sentence in paragraph 20 of the Paper refers to evidence of a strategy to exclude competitors as evidence which may be helpful to interpret the dominant undertaking’s conduct. The Paper’s reference to “strategy” should probably be understood to mean *subjective* intent to disambiguate a particular conduct. However, the notion of “interpreting” is broader than disambiguating, potentially supporting a primary or exclusive reliance on subjective intent for a finding of illegality. An example of this would be where there is apparent justification for a certain refusal to deal, but damning evidence is found that captures the CEO explaining a real anticompetitive strategy behind the refusal. Given this possibility, the need to address the uncertainties left by the case-law becomes even more important, to prevent less reliable evidence from directing the outcome in future cases.

2.5 Conclusion

⁶³ Para. 20 (emphasis added).

⁶⁴ See also, with specific regard to predatory pricing, para. 66 which refers to “direct evidence *consisting of documents from the dominant undertaking*” and thus seems to restrict the options even further for such cases.

In conclusion, a rundown of the cases where subjective intent was integral to the theory of harm under Article 102 TFEU illustrates the emergence of a pattern (see below, Fig. 1), although not always consistent, while also highlighting a few “gaps” that require filling. First, and at the most basic level: subjective intent is never used in isolation from, or in conflict with, its objective counterpart (the existence of likely effects). As to its role, it can be used as additional element to support a finding of infringement established on the basis of objective intent (but not as a defense against it). In addition, it gains particular salience where evidence of objective intent is inconclusive, to disambiguate the nature of a practice that could potentially be both pro- and anti-competitive.

Second, where subjective intent has a disambiguating function, it can only be used to support an infringement if it is based on “objective factors”. This does not mean that the evidence provided has to be incontrovertible or even necessarily of “direct” nature: “objectivity” in this context refers to the virtually universal acceptance of the logic behind any inference that is made from it. If there is a reasonable doubt as to its possible interpretation, that evidence cannot be used alone to establish a violation.⁶⁵ For example, if the use in internal documents of revealing terms like “fighting ships”, “fighting off” a competitor or “pre-empt” a given market was the only piece of evidence, it would arguably be enough for a defendant to cast doubt on the meaning of those terms.⁶⁶ In contrast, non-objective evidence can be taken into account as part of the overall assessment when combined with other indicia, which may include for instance past conduct or a trajectory of behavior, as long as they are sufficiently objective and consistent.⁶⁷

On this point, the Guidance Paper appears to depart from the existing case-law by only admitting the use of “direct” evidence. This discrepancy has the potential to hinder the effectiveness of competition law and lead to divergent outcomes, and it remains to be seen the extent to which it will be followed. Similarly, the Guidance Paper’s statement that

⁶⁵ Case T-286/09, *Intel v Commission*, ECLI:EU:T:2014:547 para. 719; case T-25/95, *Cimenteries BCR and Others v Commission* [2000] ECR II-00491, para 1838.

⁶⁶ However, it is questionable that a reasonable disagreement can persist on the significance of “pre-empting”, after its inclusion in the Guidance paper. See supra n. 63.

⁶⁷ This is in fact required by the principle of effectiveness. See C-74/14, *Eturas and others* EU:C:2016:42, para. 37.

subjective evidence can be used to *interpret* conduct by the dominant firm is risky to the extent that it could be taken to mean that evidence of subjective intent may prevail over conflicting evidence of objective intent. However, this would run against a core principle identified in the case-law: the necessity of a link between the subjective and objective components of intent. The next section, by reference to the recent case of *Google Shopping*, illustrates that the risk of departure from that principle is not insignificant.

Fig. 1: Cases where intent played a central role to the establishment of an abuse

Case	Practice	Objective Intent	Subjective Intent	Trigger words and nature of evidence of subjective intent	Role of subjective intent
<i>AKZO</i> (CJEU 1991)	Predatory Pricing	Pricing below ATCs	Internal documents + threats to competitors	“prices offered to customer chosen to be <i>well below</i> competitor’s prices to that customer” (indirect, objective)	Disambiguating
<i>Tetra Pak II</i> (CFI 1994)	Predatory pricing	Price below AVCs + magnitude of price differences in country of predation	Internal documents	“need to make sacrifices to <i>fight off</i> competitor” (indirect, subjective)	Corroborating

<i>Compagnie Maritime Belge</i> (CFI 1996)	Selective price-cutting	Price-matching pattern	Internal documents + admission at hearing	- “ <i>getting rid of competitor</i> ” (direct, objective) - “ <i>use of fighting ships</i> ” (indirect, objective)	Disambiguating
<i>France Telecom</i> (CFI 2007)	Predatory pricing	Pricing below ATCs	Internal documents	“ <i>pre-empting ADSL market</i> ” (direct?, objective)	Disambiguating
<i>Astra Zeneca</i> (CJEU 2010)	Misleading representations to patent office	Sufficient likelihood of creating obstacles to competition + manifest lack of transparency	Internal documents	Instructions to choose a specific date for SPC (indirect, subjective) application; different date for different SPC applications (indirect, subjective)	Corroborating

3. Intent in the algorithmic age: the *Google Shopping* decision and its legal basis

Given the fundamental role of intent in the definition of abuse, one may query how this combination is maintained in an algorithmic environment -where effects are generated by

the operation of one or more mathematical formulas. On 27 June 2017, the European Commission closed its investigation in the *Google Shopping* case which involved this very issue. It found a breach of Article 102 TFEU in relation to Google’s “more favourable positioning and display of its own comparison shopping service compared to competing comparison shopping services” (hereinafter, “the conduct”).⁶⁸ The Commission’s Decision is important for several reasons. First and foremost, it constitutes the first application of the leveraging theory in an algorithmic context, where as a result of certain algorithmic design choices⁶⁹ a dominant undertaking systematically directs (“nudges”) consumers towards its own goods or services in a secondary market. On its part, Google argued both in the proceedings before the European Commission and in the appeal it lodged against the Decision⁷⁰ that the Commission applied a novel theory of abuse,⁷¹ and therefore in accordance with its previous practice⁷² should not have imposed a fine⁷³. According to Google, the conduct could not be deemed abusive unless it is proved that the top results in Google Search constitute an essential facility. This requires the satisfaction of the stringent criteria laid out in *Bronner* for abusive refusal to deal, that is:

- (i) the refusal was likely to eliminate all competition in the relevant market;
- (ii) such refusal was incapable of being objectively justified; and

⁶⁸ European Commission, Case AT.39740 , Brussels, 27.6.2017, C(2017) 4444 final. Available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/39740/39740_14996_3.pdf (hereinafter, “Decision”).

⁶⁹ By “design choices”, I refer here to the rules and criteria embedded in the algorithm, including any subsequent changes or “updates” (as they are typically called in the context of Google search), without entering in this context into the specifics. Further, I am using a particular notion of algorithm, as a set of mathematical instructions to provide ranking and selection intermediation (also known as “gatekeeping”) services.

⁷⁰ See Case T-612/17, Action brought on 11 September 2017 – *Google and Alphabet v Commission*, OJ C 369, 30.10.2017, p. 37–38.

⁷¹ See also Pinar Akman, ‘The Theory of Abuse in Google Search: A Positive and Normative Assessment Under EU Competition Law’ 1 *Journal of Law, Technology and Policy* (2017), 301-374; Magali Eben, ‘Fining Google: a missed opportunity for legal certainty?’ 14 *European Competition Journal* (2018), 129-151.

⁷² See Commission Decision COMP/38.096 *Clearstream – Clearing and Settlement* OJ C 165, 2009, 7, paras. 344 and 345; Commission Decision, AT.39985 *Motorola – Enforcement of GPRS Standard Essential Patents* OJ (C 344), 2014, 6, para. 561.

⁷³ For a persuasive argument that this runs counter to the principle of legal certainty, see Magali Eblen, *supra* n. 71.

- (iii) the service in itself was indispensable to carrying on that person's business, inasmuch as there is no actual or potential substitute in existence for the facility in question⁷⁴.

However, the Commission rejected this argument, noting that it had already used a self-favouring theory to establish abuse in a number of cases⁷⁵. The Commission's reasoning is quite succinct: the Decision cites a number of cases that present significant differences from the conduct at stake, without explaining their direct relevance or why the conditions set out in those cases would not apply. For example, the imposition of liability in the *Microsoft* case was squarely dependent on the indispensability of the interoperability information that Microsoft had refused to provide. Similarly, the *Telemarketing* case explicitly refers to the existence of a dominant position in the market for a service which is indispensable for the activities of an undertaking on another market⁷⁶, although it claims to apply a broader principle derived from *Commercial Solvents*⁷⁷ – where such indispensability was never demonstrated. However, the situation in that case was fundamentally different as it concerned a dominant company's refusal to continue to supply an existing customer⁷⁸, as opposed to a *de novo* refusal.⁷⁹ Finally, while the Commission's reliance on *Tetra Pak II* serves to point out that a dominant company can be liable for conduct carried out on a neighbouring market, it says little about the nature of the abuse – which in that particular instance concerned a number of practices, ranging from tying to predatory pricing, price discrimination and other practices limiting production and technical development.

⁷⁴ Case C-7/97, *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG* [1998] ECR I-7791, para. 41.

⁷⁵ Decision, para. 649 and 334, referring to Case 311/84, *Télémarketing* EU:C:1985:394, para. 27; Case C-333/94 P, *Tetra Pak II* EU:C:1996:436, para. 25; Case T- 228/97, *Irish Sugar* EU:T:1999:246, para. 166; Case T-201/04, *Microsoft* EU:T:2007:289, para. 1344.

⁷⁶ *Id.*, para 26.

⁷⁷ Cases 6/73 and 7/73, *ICI and Commercial Solvents v Commission* [1974] ECR 223.

⁷⁸ *Id.*, para. 25.

⁷⁹ See in this sense also Thomas Hoppner, 'Duty to Treat Downstream Rivals Equally: (Merely) a Natural Remedy to Google's Monopoly Leveraging Abuse', 3 *European Competition and Regulatory Law Review* (2017) 208.

It is in its reference to *Irish Sugar* that the Commission provides a more substantive suggestion for the abuse in question. The Decision references in particular paragraph 166 of that case, where the Court explicitly mentions that the principle established in *Tetra Pak II* is applicable even where the conduct “is not tantamount to refusal to supply”.⁸⁰ On one view, this may be read simply as following the same logic of the CJEU ruling in *Telia Sonera* that requiring the establishment of a refusal to deal before any conduct of a dominant undertaking in relation to its terms of trade can be regarded as abusive would unduly reduce the effectiveness of Article 102 TFEU.⁸¹ However, this statement has a more specific meaning when read in context, i.e. to condemn as discriminatory practices the granting of rebates to wholesale customers on the basis of whether they compete with the dominant firm at the retail level. Interestingly, *Tetra Pak II* was one of the few cases where the Court embraced the idea that Article 102(c) is applicable to discrimination which creates competitive disadvantage between a trading party and the dominant firm (primary line injury), as opposed to between that trading party and other customers of the dominant firm (secondary line injury).⁸² This more expansive interpretation of Article 102(c) would appear to justify the conclusions reached in *Google Shopping*.

Nevertheless, the Decision does not build on the theoretical support offered by *Tetra Pak II* to articulate its theory of harm; and in doing so, it fails to properly establish an abuse, as it gives insufficient indications on the type of conduct that falls short of the standards of special responsibility ascribed to a dominant company. This also generates problems of adequacy of the remedy imposed, as the Commission unqualifiedly ordered Google to take adequate measures to bring the conduct to an end, and refrain from repeating it, or engaging

⁸⁰ Para. 166. The specific wording used by the Court is the following: “Even if the failure to grant rebates to other industrial sugar purchasers is not tantamount to a refusal to supply, the principle of the abusive exploitation of a dominant position on a market to affect competition on another market has already been established”.

⁸¹ Case C-52/09 *Konkurrensverket v TeliaSonera* [2011] ECR I-527, para. 58.

⁸² See Case T-229/94, *Deutsche Bahn AG v. Commission* ECR [1997] II-1689; and Case COMP/38.745, *BdKEP – Restrictions on Mail Preparation*, Commission Decision of 20 October 2004 [unreported], available at http://ec.europa.eu/competition/antitrust/cases/dec_docs/38745/38745_32_1.pdf. It should be noted that not everyone accepts that this is a correct interpretation of the purpose of article 102 ©. See e.g. Damien Geradin and Nicolas Petit, ‘Price Discrimination under EC Competition Law: The Need for a case-by-case approach’, GCLC Working Paper 07/2005.

in any act or conduct with the same or an equivalent object or effect.⁸³ However, it is difficult for Google and other market participants to give concrete content to the concept of ‘self-favoring’. The Decision failed to define the prohibited conduct, and the type of abuse it establishes, despite having at its disposal ample room: the practice of self-favoring could technically be caught as a manifestation of various types of conduct prohibited by Article 102.⁸⁴ Unfortunately, the Commission never ventured into that type of analysis, rather preferring to rely on the non-exhaustive character of the practices constituting abuse that are enumerated in the text of Article 102. This is regrettable because the lack of clarity in the definition of abusive conduct in the Decision is likely to generate adverse impact on investment and innovation.

3.1 The notion of preferential treatment in *Google Shopping*

The divergence of views between Google and the Commission relates to the specificities of the application of leveraging theory (and in particular the so called ‘self-favoring’ abuse) in this particular context. In order to appreciate these specificities, it is necessary to make a clarification about the technology under discussion. Striving to provide users with the most relevant results, search engines undertake editorial functions in indexing, triggering, ranking and displaying content. Those choices are made primarily by designing algorithms, i.e. rules that will govern the operation of Google’s crawling, triggering, ranking and displaying technologies to perform the desired process. Because of these editorial functions, algorithms can have in-built biases which lead to systematically favoring certain content, although that may not necessarily be the result of a deliberate choice of the designer. Since the stage of algorithmic design is removed from the generation of results, it is often difficult for the designer to anticipate all the possible consequences. This holds even more true when it comes to unsupervised learning algorithms, recently incorporated

⁸³ Decision, Art. 2-4.

⁸⁴ See in this regard Nicolas Petit, ‘Theories of Self-Preferencing Under Article 102 TFEU: A Reply to Bo Vesterdorf’ (April 29, 2015). Available at SSRN: <https://ssrn.com/abstract=2592253> or <http://dx.doi.org/10.2139/ssrn.2592253>.

into Google Search,⁸⁵ that are characterized by the ability to automatically learn and improve from experience without being explicitly programmed. The problems of transparency, fairness and accountability of algorithmic systems are so complex and important that they have come to define an entire field of research, much of which focused on machine-learning.⁸⁶ They are now an increasing source of headaches for courts and regulators.

Given the challenges in predicting the nature and effects of algorithmic design decisions on the market, it is disconcerting that the Decision condemns a conduct resulting from algorithmic design choices, without any disclaimer as to the operator's actual or presumed intent to achieve the prohibited outcome. The underlying criticism seems to be that Google should have appreciated the consequences of its choices, including the impact of those on competition in the market for comparison shopping services. In fact, while in some instances the preferential treatment ostensibly arises from the choice of criteria triggering a given algorithmic result,⁸⁷ in other parts of the Decision the Commission merely takes issue with the outright exclusion of Google Shopping from applying certain criteria that adversely affect the position of competing price comparison services (notably the [...] and Panda algorithms).⁸⁸ Thus, despite reiterating that, in accordance with the case-law of the CJEU, an abuse of a dominant position is prohibited under Article 102 of the Treaty “regardless of the means and procedure by which it is achieved”, and “irrespective of any fault”, the Decision does not offer any comfort for operators of algorithmic technologies by pointing what particular conduct Google has fallen short of, i.e. what duty of care has been breached. This is because, taken at face value, the Commission's formulation in the Decision implies that a dominant company having developed or used an algorithm is *de*

⁸⁵ Cade Metz, ‘AI Is Transforming Google Search. The Rest of the Web Is Next’, *Wired* (2 April 2016). Available at <https://www.wired.com/2016/02/ai-is-changing-the-technology-behind-google-searches/>.

⁸⁶ See for instance the annual conferences on Fairness, Accountability and Transparency (FAT) and on Fairness, Accountability and Transparency in Machine Learning (FATML), at <https://fatconference.org> and <https://www.fatml.org/>.

⁸⁷ A good example is the “signals” for triggering the appearance of Product Universal, and/or its appearance in the middle to top position of the results in the first page: the number of stores and the number of shopping comparison engine in the top-3 generic search results. See Decision, para. 391.

⁸⁸ Decision, para. 512.

facto strictly liable for any possible anticompetitive (in particular, self-favoring) effects derived therefrom.

Although one may contend that the Decision must be premised on recognition of intention or negligence, as required by law, this premise is nowhere to be seen in the assessment of Google's liability for algorithmic results. The Commission only refers to *subjective* intent by the concerned undertaking "to favour its own services over those of competitors in order to leverage its position in general search into the market for shopping comparison services".⁸⁹ Crucially, this subjective inquiry was used by the Commission to satisfy the requirement of objective intent for such conduct to eliminate competitors. In particular, the Commission found in internal documents that the Google's Engineering Director responsible for Froogle, the previous version of Google Shopping, stated that "Froogle stinks" and warned that:

- "(1) [t]he [Froogle] pages may not get crawled without special treatment; without enough pagerank or other quality signals, the content may not get crawled.
- (2) If it gets crawled, the same reasons are likely to keep it from being indexed;
- (3) If it gets indexed, the same reasons are likely to keep it from showing up (high) in search results [...] We'd probably have to provide a lot of special treatment to this content in order to have it be crawled, indexed, and rank well".

While this provides a very convincing illustration of Google's general plan to self-favor, proven with direct and objective evidence, the fundamental question is whether such evidence may legitimately be used to satisfy the required intent (in its subjective and objective component) with regard to the particular acts which are being held against the dominant undertaking. Specifically, the Decision takes issue with the outcome of Google's algorithmic choices without proving that either the selection of certain criteria or the granting of an exemption to Google from the application of certain penalties violates a duty of care, from which negligence could be deduced. The only element provided in that regard is that Google does not adequately inform users that Product Universal was positioned and

⁸⁹Decision, para. 491.

displayed using different underlying mechanisms than those used to rank generic search results, despite the fact that it explicitly labeled those search results as “sponsored”.⁹⁰

The net result is that Google, or any other dominant company providing algorithmic ranking and intermediation services, will be required to adopt wide-ranging measures of self-monitoring to ensure “compliance by design”, which Commissioner Vestager has recently alluded to.⁹¹ It has been suggested that this would imply a requirement for companies to build in sufficient constraints on algorithmic behavior, for example tweaking the reward function in a way that teaches the algorithm good (competitive) behaviour and punishes bad (anticompetitive) behavior, or introducing filters in order to modify the *prima facie* responses of the system.⁹² However, the satisfaction of this requirement would run into practical challenges as the vast majority of competition rules are open-ended, context-dependent and potentially requiring a balancing of conflicting values.⁹³ Furthermore, even if it were possible to devise a meaningful design approach for a specific set of commands, including a prohibition against self-preferencing, it is not clear what would be the limit (if any) to how far that compliance framework should go. Would the ranking of two equivalent products in page 1 and 2 of search results be sufficient, for instance, to trigger liability? Would Google Shopping’s persistent appearance on the first page, while not necessarily in the top results, be problematic? The Commission provides no guiding principle: neither in the substantive part of the Decision, nor in its remedial order, where it requires Google to ensure equal treatment concerning “all elements that have an impact on the visibility, triggering, ranking or graphical format of a search result in Google’s general search result pages”.⁹⁴ Ultimately, while Google may be able to get to a good compromise in the

⁹⁰ Decision, para. 663.

⁹¹ Margarethe Vestager, ‘Algorithms and competition’, Speech at the Bundeskartellamt 18th Conference on Competition, Berlin, 16 March 2017. Available at https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/bundeskartellamt-18th-conference-competition-berlin-16-march-2017_en

⁹² Simonetta Vezzoso, ‘Competition by Design’ (November 28, 2017). Prepared for Presentation at 12th ASCOLA Conference, Stockholm University, 15-17 June 2017. Available at SSRN: <https://ssrn.com/abstract=2986440>, 28

⁹³ *Id.*, 29.

⁹⁴ The only limit it provides in that respect, presumably reflecting the feedback received in the ‘market-testing’ of the commitments offered to Commissioner Almunia in 2013 and 2014, is that any measure chosen by Google to comply with the order “should not lead to competing comparison shopping services being charged a fee or another form of consideration that has the same or an equivalent object or effect as the infringement established by this Decision”. Decision, para. 700.

definition of the conduct it is required to adhere to under the remedy,⁹⁵ we may query what that high-level definition of equal treatment means for the future development of algorithmic technologies.

The crux of the problem derives from the fact that the Decision does not define a threshold of materiality for differential treatment by a dominant company to fall foul of Article 102. The Commission presents data showing that the conduct in question can drive competitors out of business, reducing incentives to innovate and consumer choice, and leading to higher prices.⁹⁶ However, the evidential threshold is lightened by recent case-law that Article 102 prohibits behavior that tends to restrict competition or is *capable* of having that effect, regardless of its success.⁹⁷ Following that line of cases, the reference in the remedial order to “not engaging in any conduct or act having equivalent *object* or effect”⁹⁸ may well be interpreted as preventing algorithmic decisions that have a theoretical capability of favoring Google’s own services despite the absence of any materialized, or indeed likely, effects. That would appear to be in tension with the rationale of negligence, which is the violation of a duty of care in connection with the foreseeability and preventability of the harmful act.⁹⁹ It also would call for an inquiry into the subjective element (was discrimination the purpose of the developer, or whoever else deploys the algorithm?), which could be highly problematic if unconstrained by the principles identified in section 2.1.

⁹⁵ As a measure implementing the remedy, since 28 September 2017 Google shifted its shopping operations into a separate entity, with other companies now able to bid for places in the Shopping Units. Furthermore, each ad in the Shopping Unit indicates which comparison service is providing it. However, it has been reported that as many as 99% of those Shopping results are held by Google. See Searchmetrics, ‘Google Shopping: Is the Revamped Comparison Service Fairer to Competitors?’ (29 January 2018), at <https://blog.searchmetrics.com/us/2018/01/29/google-shopping-revamped-fairer-to-competitors/>. See also Sam Schechner and Nathalia Dozdriak, ‘Google Rivals Ask EU to Toughen Measures in Antitrust Case’, Wall Street Journal (30 January 2018). Available at <https://www.wsj.com/articles/google-rivals-ask-eu-to-toughen-measures-in-antitrust-case-1517334038>.

⁹⁶ Decision, paras. 594-597.

⁹⁷ Emphasis added. See *Id.*, para. 602; Case C-52/09, *Konkurrensverket v TeliaSonera Sverige AB* EU:C:2011:83, para. 64; Case C- 549/10 P, *Tomra Systems and Others v Commission* EU:C:2012:221, para. 79; Case T-336/07 *Telefónica SA v Commission* EU:T:2012:172, para. 272, upheld on appeal in Case C-295/12 P, EU:C:2014:2062, para. 124; Case C-23/14 *Post Danmark* EU:C:2015:651, para. 66; see also Case T-286/09, *Intel v Commission* ECLI:EU:T:2014:547, para. 85, on this specific point confirmed on appeal in Case C-413/14, *Intel v Commission* ECLI:EU:C:2017:632, para.149.

⁹⁸ *Id.*, article 3 (emphasis added).

⁹⁹ See Blomsma, *supra* n. 10, 175.

3.2 The Decision's lack of precision in the definition of abusive conduct

As mentioned, a central problem with the Decision is that the line between permitted and prohibited conduct is blurred. Nowhere in the Decision does the Commission detail what type of algorithmic design conduct amounts to preferential treatment, other than stating that it involves the application of different standards for ranking and visualization to Google Shopping than to other comparison shopping services. In particular, the Decision begs the question of whether a dominant undertaking remains free to set up its ranking and selection (“triggering”) criteria, so long as those are applicable indistinctively both to its products and services and to those of its competitors. The Commission seems to gloss over those details, affirming that “[it] does not object to Google applying *certain* relevance standards, but to the fact that Google’s own comparison shopping service is not subject to those same standards as competing comparison shopping services”.¹⁰⁰ This leaves us with the suspicion that a dominant undertaking such as Google could in fact be found liable for designing its algorithms in a way that leads to a disparate impact on a given class of competitors (or in the case of the implementation of the remedy, its competing comparison shopping services), despite the indiscriminate application of those algorithms to all products and services. While that finding would be consistent with the European Commission’s focus on effects, it would certainly run against the presumption of innocence in imposing a fine to an undertaking where the effects of its actions were not foreseeable at the time of designing the relevant algorithm (or implementing the relevant algorithmic change). And, as was argued in section 2.1, even beyond the imposition of a fine, this runs against the essence of the notion of abuse, which presupposes some form of intent -either intention or negligence.

¹⁰⁰ Id., para. 440 (emphasis added). By choosing to use the word ‘certain’, the Decision suggests that the use of certain *other* criteria may be problematic. This hypothesis appears to be confirmed by para. 537, according to which “the Commission does not object to Google applying specific criteria *per se* but to the fact that Google *prominently* positions and displays results only from its own comparison shopping service and not from competing comparison shopping services” (emphasis added).

By the same token, a blanket prohibition of self-favoring formulated in these terms would be likely to impose a disproportionate burden on a range of undertakings, if not accompanied by some limiting principle. Much like a dominant company's indiscriminate conditions of sale may lead to refusal to supply in violation of Article 102 when it fulfills the specific conditions established in *Bronner*,¹⁰¹ an algorithm with indiscriminate application but disparate impact on competitors should be held in violation of Article 102 only if it meets specific requirements serving as proxy of consumer harm. To be clear, this is not a call for the application of the *Bronner* conditions, which was unsurprisingly invoked by Google, but rather a recognition that the Commission would be well advised to narrow the net it casts to catch anticompetitive conduct perpetrated through algorithmic nudging.

3.3 Conclusion

The Commission's decision in *Google Shopping* is a proverbial "mixed bag" from the perspective of advancing antitrust doctrine. On one hand, it represents a milestone for the treatment of algorithmic leveraging, offering a large amount of evidence to illustrate that self-favoring in this context may lead to anticompetitive foreclosure. On the other hand, it leaves many questions unsettled concerning the scope and limits of the type of abuse in question. Most notably, by failing to properly characterize the requisite intent for abusive self-favoring, it lends itself to an interpretation that is overly restrictive; and in doing so, it may violate the presumption of innocence, the principle of legality as well as the principle of proportionality in relation to the remedy. While it is hoped that the Commission will make the necessary adjustments in the approval of the measures offered by Google to restore equal treatment in the relevant market, one cannot help but noting that it will be the Decision and the analysis contained therein which will set the precedent, at least while the appeal by Google to the EU General Court is pending.¹⁰²

¹⁰¹ Namely, that the facility that is the object of refusal is indispensable to compete on a downstream market, and that refusal is not objectively justified. See *Oscar Bronner GmbH & Co. KG v. Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co. KG*, Case C-7/97 [1998] ECR. I-7791, para. 112.

¹⁰² In that appeal, Google puts forward several pleas, including two concerning the inappropriate characterization of its conduct as discrimination and two concerning the inadequate consideration of objective justifications. See Case T-612/17, Action brought on 11 September 2017 – *Google and Alphabet v Commission* OJ C 369, 30.10.2017, 37–38.

4. *Google Shopping* as a cautionary tale for antitrust intent in an era of algorithms and big data: the need for limiting principles

Google Shopping is a great test case for the future of competition enforcement, as it gives us a preview of some of the problems that we are likely to encounter with the increasing automation of a range of human activities and the consequent delegation of responsibilities to the machines. There have already been multiple instances over the last decade of algorithms generating problematic and presumably unanticipated results, typically remedied by the designers or controllers of those algorithms in response to public backlash or court order.¹⁰³ The clear tendency in these situations is to attempt to escape scrutiny by demonstrating that the action was the result of complex algorithmic processing, which would have been hard to predict *ex ante*.

Antitrust is a relatively newcomer in this field, but it is clear that in order to maintain and promote effective competition, we need to be able to extend the rules of liability to situations where the principal is one step removed from the agent. This implies that it is particularly important to define exactly what constitutes valid antitrust intent in this context, how it can be proved and to what extent it must be proven. Importantly, the discussion of antitrust intent in Article 102 TFEU in the Decision exposed a couple of problems which are likely to surface in an era of algorithms and big data.

First of all, the pervasive reliance on algorithmic technologies, big data and predictive analytics may significantly impact the processes of abstraction and inferences which decision-makers used to rely upon, and which may form the basis for the definition of objective intent. The most important consequence of that is that the processes of prediction for dominant companies might be significantly more advanced and sophisticated than those of other market participants, both consumers and competitors, as well as competition

¹⁰³ See e.g. Stavroula Karapapa, Maurizio Borghi, ‘Search engine liability for autocomplete suggestions: personality, privacy and the power of the algorithm’ (23) 3 International Journal of Law and Information Technology (2015), 261–289.

authorities.¹⁰⁴ This suggests that perhaps a greater role should be conceived for *subjective* standards of liability, which would also be facilitated by the increased availability of records. The finding of intention, as opposed to negligence, would enable authorities to judge dominant firms on the basis of their own superior knowledge, rather than the benchmark of the reasonable (average) person. Unfortunately, the problem with that idea is that the weight that can be attached to subjective intent is elusive: despite the absence of inchoate offences against competition under EU law, courts have never explicitly clarified the extent to which subjective intent must be linked to an anticompetitive effect. Should a misconceived attempt to abuse a dominant position be punished? The case-law has consistently based abuses on the concurrence of a subjective and objective component, which it is argued here that should become a guiding principle for future cases (see below, section 4.1).

Secondly, it is crucial to clarify what sort of methods of proof and inference would be deemed “subjective”, and therefore considered only as additional and supporting evidence. Tracing the impact of an algorithm to the intent of its originator is likely to be the key and sometimes only question for establishing liability, for which we must have a clear and consistent answer. To complicate that, the distinction between “subjective” and “objective” may be significantly different from that between “direct” and “indirect” evidence set out in the Guidance Paper. And as we know from previous experience, it is questionable that the Paper will be followed at national level when it goes beyond the *acquis*.¹⁰⁵

Third and relatedly, the process of inference of intent from algorithmic action must have human fallacy as a backstop. We cannot expect developers or controllers of algorithms to prognosticate any possible anticompetitive effect that may result from their actions, as this would certainly hinder the deployment of innovative algorithms. However, we might want to hold them accountable (if not liable) for those choices by requiring transparency and explainability of automated decisions, as is currently done in the field of data protection

¹⁰⁴ A phenomenon that Stucke and Grunes call “nowcasting”: see Maurice E. Stucke and Allen Grunes, *Big Data and Competition Policy* (Oxford University Press, 2016).

¹⁰⁵ See Zlatina Georgieva, ‘Competition soft law in French and German courts: A challenge for online sales bans only?’ *Maastricht Journal of European and Comparative Law* 2017, Vol. 24 (2) 175–193

law.¹⁰⁶ This is indeed the most pressing question: to what extent can objective antitrust intent be inferred from a set of actions performed by an algorithm, such that they can be linked to negligence in design and control? On one hand, antitrust intent can serve as a safeguard against the imputation to an algorithmic controller or designer of any possible impact an algorithm can generate on the market (see the principle identified in section 2.1, and formalized in section 4.1 below). On the other hand, an insufficiently clear definition of its role can be chilling investment and innovation in the development of predominantly beneficial technologies, simply because they might conceivably produce anticompetitive outcomes. For this reason, it is submitted that the establishment of a “safe harbor” (see below, section 4.2) will enable antitrust to cabin investment and innovation into algorithmic technologies that comply with some key fundamental principles.

4.1 Offering a limiting principle: the case for “qualified intent”

As illustrated, the potential reach of the concept of preferential treatment laid out by the European Commission in the *Google Shopping* decision is quite broad, and as currently formulated is likely to generate adverse consequences for investment and innovation. Accordingly, what is needed for a workable concept of preferential treatment is a limiting principle which provides legal certainty for undertakings offering algorithmic selections or ranking services.

It is submitted that a valid limiting principle to the scope of self-favoring can be found in a more careful and systematic treatment of intent in antitrust violations, with particular consideration for its role in establishing liability for algorithmic decisions. This article therefore proposes a “qualified intent” doctrine, drawing from the “qualified effects” test used to establish extraterritorial jurisdiction in several EU antitrust cases, and recently endorsed by the CJEU in *Intel*.¹⁰⁷ The qualified effects test allows the extension of jurisdiction outside the common EU market when it is *foreseeable* that the conduct in

¹⁰⁶ See article 13 (2) (f), article 14 (2) (g), article 15 (h), article 22 as well as Recital 71 of that Regulation.

¹⁰⁷ Case C-413/14 P, *Intel Corp. v European Commission* ECLI:EU:C:2017:632, paras. 40-65.

question will have an *immediate and substantial effect* in the European Union. According to that test, it is sufficient to take account of the probable effects of conduct on competition in order for the foreseeability criterion to be satisfied.¹⁰⁸ In turn, while the criterion of immediacy has not been comprehensively addressed, it has been held that the mere capability of producing an immediate effect is sufficient, when considering certain conduct as an integral part of an overall strategy to foreclose market access.¹⁰⁹ Lastly, the substantiality criterion has been held to apply to each part of the conduct considering the overall strategy, for otherwise that would lead to an artificial fragmentation of comprehensive anticompetitive conduct.¹¹⁰ Translating this into the intent context, it is argued that the requisite intent should be grounded on three basic principles:

- (1) the anticompetitive outcome is foreseeable by the dominant company, based on its knowledge or reckless disregard of the consequences of the action;
- (2) that outcome is an immediate consequence of the dominant company's purported conduct, meaning that its materialization does not require intervening actions by competitors or consumers that depart from the *status quo*;
- (3) it is substantial, in the sense that the intent is grounded upon a set of facts which, in the context of the entire body of evidence, make the achievement of the anticompetitive outcome more likely than not.

To a large extent, this test is a rationalization of existing case-law, in particular with regard to conditions n. 2 and 3. To clarify, the concept of "*status quo*" in condition n. 3 could be best illustrated by reference to the idea of chain of causation in *dolus eventualis*, where responsibility for events caused by an act supplemented by an intervention by a third party can be attributed to the perpetrator where circumstances suggest that the intervention was a foreseeable risk, and the perpetrator could not have been unaware of the consequences. More significant is the suggestion provided in condition n. 1, which links the foreseeability of the event to the knowledge or reckless disregard of the perpetrator: here, the change is subtle as it simply moves from a standard of "knowledge or negligence" to a standard of

¹⁰⁸ Id., para. 51.

¹⁰⁹ Id., para. 52.

¹¹⁰ Id., para. 57.

“knowledge or reckless disregard”. The consequence of such move is that the inquiry becomes subjective, rather than objective, thereby enabling authorities to take into account the superior knowledge of certain dominant firms over a reasonable market participant.

From a systemic perspective, these three conditions would enable the application of the self-favoring abuse in the algorithmic context to be compatible with the principle of proportionality,¹¹¹ the principle of legal certainty,¹¹² and both the principle of legality and the presumption of innocence in relation to the imposition of sanctions.¹¹³ In particular, the principle of proportionality prevents the imposition of a prohibition that makes compliance for an undertaking impractical, with the result of deterring that undertaking from engaging into a broader set of conducts than the one the legislator aims to prevent. In fact, an alternative measure exists which would achieve the objective of preventing algorithmic leveraging, but would not equally restrict freedom to conduct business, and indeed deter beneficial conduct in the first place: the legislator could establish a requirement of intent linked to a clear process of “algorithmic due diligence”. This would give the dominant undertaking a benchmark against which their conduct can be measured. This also satisfies the principle of legal certainty, which requires foreseeability in the application of the law,¹¹⁴ and the principle of legality and the presumption of innocence, according to which any doubts as to the question of guilt are resolved in favor of the accused.¹¹⁵ The next section provides a concrete suggestion as to how that process could be formulated,

¹¹¹ The principle of proportionality in EU law holds that “the lawfulness of the prohibition of an economic activity is subject to the condition that the prohibitory measures are appropriate and necessary in order to achieve the objectives legitimately pursued by the legislation in question; specifically, when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued”. See Case C-331/88, *The Queen v. Minister for Agriculture, Fisheries and Food and The Secretary of State for Health, ex parte: Fedesa and others* [1990] ECR I-423, para. 113.

¹¹² To the effect that this is a general principle of EU law, see case C-94/05, *Emsland-Stärke GmbH v Landwirtschaftskammer Hannover* [2006] ECR I-2619, para. 43.

¹¹³ See *supra*, section 2.1.

¹¹⁴ Case C-63/93, *Duff and Others* [1996] ECR I-569, para. 20; Case C-107/97, *Rombi and Arkopharma* [2000] ECR I-3367, para. 66; Case C-199/03, *Ireland v Commission* [2005] ECR I-8027, para. 69; Case C-17/03, *VEMW and Others* [2005] ECR I-4983, para. 80; Case C-158/06, *ROM-Projecten* [2007] ECR I-5103, para. 25.

¹¹⁵ See in this regard Directive 2016/343 of 9 March 2016 on the strengthening of certain aspects of the presumption of innocence and of the right to be present at the trial in criminal proceedings, OJ L 65, 11.3.2016, p. 1–11.

including a further adjustment which appears necessary to ensure the effectiveness of competition enforcement in a world of a fast-moving (and self-learning) algorithms.

4.2 Towards a negligence-based safe harbor for gatekeeping algorithms?

As discussed so far, much of the controversy over the imputation of liability for algorithmic conduct stems from the absence of a clear duty of care with regard the effects generated by certain kind of algorithmic tools. Accordingly, the proposal advanced in this section is to establish just that, with a view to qualifying the standard of diligence that is expected from dominant firms offering algorithmic services. The proposal builds on the Commission's qualification of Google's conduct as "active", i.e. not simply refusing to give competing comparison shopping services access to a portion of its general search results pages, but engineering preferential treatment in the design of the algorithm (specifically, exempting Google Shopping from demotions and "hardcoding" its position in the ranking).¹¹⁶ This raises the question of how undertaking ought to interpret the active/passive nature distinction moving forward: what is the dividing line?

Of course, the likely interpretation is that the Commission meant that abusive refusal to deal is a passive conduct, in the sense that it requires a prior request by a competitor to be granted access, whereas preferential placement is a conduct that is initiated and completed by action of the dominant company alone. However, a deeper and more conceptual distinction would be one between results that are a foreseeable consequence of the algorithmic design choices made by the dominant firm, and results that are generated automatically without its knowledge or control. This distinction would more accurately reflect the criteria deemed relevant for the attribution of liability for machine-generated result for two reasons. First, because it would promote responsibility in design and control over algorithmic processes in line with developments in other areas of law. Second, because in a world of multiple and machine-to-machine interactions the potential speed

¹¹⁶ Decision, para. 650.

and automatic nature of acts such as requesting and granting access could blur the distinction between ranking and access.

A useful reference in marking the line between “active” and “passive” in the context of algorithmic is the “safe harbor” provided by Article 14 of the E-commerce Directive, which grants a content host immunity from liability under European law for the information stored provided that: “(a) it does not have actual knowledge of illegal activity or information and, as regards claims for damages, is not aware of facts or circumstances from which the illegal activity or information is apparent; and (b) upon obtaining such knowledge or awareness, acts expeditiously to remove or to disable access to the information”.¹¹⁷ The CJEU’s reading of the safe harbor, based on Recital 42 of the Directive, is that this requires an activity of a “mere technical, automatic and passive nature, which implies that the information society service provider has neither knowledge of nor control over the information which is transmitted or stored”.¹¹⁸

Those conditions could then be used to design, with appropriate institutional and procedural safeguards (above all, a fair and independent dispute resolution procedure), a framework of ‘notice and explanation’ for undertakings that consider themselves to be adversely affected by the algorithm in their ability to compete in the market. This framework would grant the algorithmic operator immunity from liability for any differential treatment which puts an undertaking competitive disadvantage (*vis-a-vis* the operator itself or a third party) as long as a dedicated procedure was put in place to receive such notices and respond within an appropriate timeframe. The affected undertaking, if unconvinced by the explanation, could then submit that together with its substantiated claim to an independent body, which could order the readjustment of the ranking of that undertaking but also establish the allocation of litigation costs, as well as impose penalties

¹¹⁷ Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, OJ L 178, 17.7.2000, p. 1–16. Applying these conditions to the Commission’s reasoning, they could be used to give content to the notions of “active” and “passive” conduct mentioned at para. 650: see *supra*, note 116116.

¹¹⁸ Joined cases C-236/08 and C-237/08 *Google France v Louis Vuitton et al* [2010] ECR I-02417, paras. 112-114. See also case C-324/09, *L’Oréal v eBay International* [2011] ECR I-06011, paras. 111-113; and case C-291/13, *Papasavvas v O Fileleftheros Dimosia Etairia* ECLI:EU:C:2014:2209, paras. 39, 41 and 45.

for baseless complaints.¹¹⁹ This is not simply a re-branding of the persuasive proposal of a search engine court made by Bracha and Pasquale more than 10 years ago,¹²⁰ as much as a suggestion to conceive of a broader mechanism of accountability promoted through a safe harbor¹²¹ for the types of gatekeeping algorithms discussed in this paper.

The costs involved in the management and adjudication of these claims, however, heavily weigh against the use of this procedure as the only solution to the problem of bias in the provision of results or recommendations to consumers. To increase the chances of detection of self-favoring and other types of discrimination, this *ex-post* remedial mechanism should be strengthened by some form of *ex ante* accountability. It has been suggested, for instance, that competition authorities could be given the powers to engage in “enhanced *ex-ante* monitoring” of algorithms, or to order the disclosure of algorithms altogether.¹²² Another option could be to follow the spirit of Article 14 of the E-commerce Directive, which establishes a connection between the safe harbor and the element that we have been invoking so far: a diligence standard. Specifically, the CJEU has stated that knowledge of illegal activity or information can be inferred from the awareness of facts on the basis of which a “diligent economic operator” *should* have identified the illegality in question and acted in accordance with Article 14(1)(b) of Directive (taking the content down).¹²³ Translating that insight into our model, algorithmic operators would not be entirely immune from scrutiny if they were somehow aware of facts, irrespective of a notice, that would make the detrimental impact apparent. To make that more specific, the safe harbor

¹¹⁹ For a similar recommendation in the US context, see Hal Singer, ‘What To Do About Google?’, *Forbes* (Sep 8, 2017), at <https://www.forbes.com/sites/washingtonbytes/2017/09/08/what-to-do-about-google/#3b18034c7001>

¹²⁰ Oren Bracha and Frank Pasquale, ‘Federal Search Commission - Access, Fairness, and Accountability in the Law of Search’, 93 *Cornell Law Review* 1149 (2008).

¹²¹ Safe harbors are not uncommon in EU competition law, the most recent example being the “choreography” established by the CJEU in *Huawei v ZTE* (Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp. and ZTE Deutschland GmbH* ECLI:EU:C:2015:477) to exempt from liability standard essential patent owners who seek an injunction in court after having followed the designated procedure. For an analysis of the scope and strength of the safe harbor, see Nicolo Zingales, ‘The Legal Framework for SEP Disputes in EU post-Huawei: Whither Harmonization?’ 36 (1) *Yearbook of European Law* (2017). 628–682. Similar to the safe harbor defined in *Huawei*, this proposed safe harbor would depend on the acceptance of third-party determination of the disputes that give rise to potential liability.

¹²² Ariel Ezrachi and Maurice Stucke, *Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy* (Oxford University Press, 2016), 230.

¹²³ *L’Oreal v eBay*, supra n. 118, para. 120.

could include among its conditions the adherence to a due diligence procedure for the design of algorithms that can effectively impact consumer choice through the selection or ranking of content. Such procedure could for instance rely on established techniques to detect the existence of bias against various classes of market players,¹²⁴ and require operators to maintain a record of that testing for inspection by a competition or judicial authority (or the independent body proposed in this section), identify a risk mitigation strategy and even define a threshold of adverse impact warranting a change of the existing rules or criteria. Interestingly, the market is already developing bias detection tools in specific domains,¹²⁵ so it may not be too far down the road that we start to see this being provided as a service across the industry, and becoming part of the regular due diligence procedure before putting impactful algorithms into commerce.

5. Conclusion

This paper surveyed the cases under Article 102 TFEU that revolved around the existence of anticompetitive intent, and discussed its role in some detail. Having addressed the key definitional questions in section 1, section 2 permitted us to identify key principles relating to the use of evidence subjective intent, most notably (a) its necessary link with effects for purpose of establishing a violation; and (b) the need for it to be based “objective factors”. Although the interpretation of the latter might vary, the General Court’s ruling in *Astra Zeneca* suggested that such evidence cannot be extrapolated through tenuous inferences and insinuations, but must be built upon a solid logical steps which should not leave room for doubts.

¹²⁴ See Christian Sandvig et al. ‘Auditing Algorithms: Research Methods for Detecting Discrimination on Internet Platforms’, *Data and discrimination: converting critical concerns into productive inquiry* (2014), 1-23. See also Karen Levy and Solon Barocas, ‘Designing Against Discrimination in Online Markets’ 32 *Berkeley Technology Law Journal* (2018).

¹²⁵ Will Knight, ‘Microsoft is creating an oracle for catching biased AI algorithms’, *Technology Review* (25 May 2018), available at <https://www.technologyreview.com/s/611138/microsoft-is-creating-an-oracle-for-catching-biased-ai-algorithms>.

Section 3 of the paper delved into the Commission's decision in *Google Shopping*, gauging the extent to which it complies with those established principles. The Decision is particularly interesting for the dual role of intent: firm and prominent in its subjective expression, as demonstrated by compelling documental evidence; and feeble and nebulous in its objective manifestation, as is suggested by the lack of standards over what constitutes preferential treatment. This is particularly problematic when considering that, as a consequence of the shallowness in this definition of preferential treatment, a host of companies providing algorithmic intermediation services might be prevented in the future from giving effect to that arguably constitutes the core results of their processes, just to stay clear of antitrust violations. Even more importantly, the imposition of liability in the absence of clear benchmarks clashes with the principle of legal certainty, the principle of legality and the presumption of innocence.

Accordingly, section 4 pondered the consequences of the *Google Shopping* Decision for providers of algorithmic gatekeeping services, attempting to offer suggestions to guide the resolution of future cases that are bound to arise in this area. Two suggestions have been offered in particular: one aimed to fix the problem of reliance on subjective intent which is disjointed from any possible anticompetitive effect, and the other purported to address the issue of identification of the standard of care on the basis of which objective intent can be established. The first problem is easier to solve, thanks to the case-law shedding the light into the right direction. In this sense, the proposal simply captures the rationale of the existing cases recommending to follow a three-pronged test, which asks whether the anticompetitive effect for the purported conduct is foreseeable, immediate and substantial. Importantly, the parameter of foreseeability would be linked to a subjective, rather than an objective test, enabling authorities to elevate the standard of prognosis for a purported conduct to the sophisticated knowledge level of a particular dominant firm, rather than that of a potentially less knowledgeable market participant.

With regard to the second problem, it is clear that the designation of a specific standard of care is a complex question that goes beyond the scope of the paper. However, the suggestion presented here concerned a procedure which aims to reconcile the need to

secure effective competition enforcement with administrability, and the imperative not to prohibit or chill legitimate business conduct. The dilemma before us is, of course, what would an optimal framework look like from that tri-dimensional perspective?

It is useful at this point to remind some of the work of Stacey Dogan, who has identified four different ways in which the law can approach design choices:

- (1) absolute non-interference (i.e., accepting any kind of design choice as legitimate as long as it produces an improvement);
- (2) the metric of economic rationality (e.g., the “no economic sense” test, which is argued to be the basis for the establishment of objective intent);
- (3) second-guessing the merits of any particular choice under a cost-benefit analysis (which she calls the “competitive effects balancing” test); and
- (4) finally, a subjective intent inquiry, where any evidence of such intent can be used to qualify a given design choice as anti-competitive.¹²⁶

Dorgan suggests that courts should be open to examining the relative effects of different aspects of a product modification, rather than remaining anchored on wooden benchmarks.¹²⁷ This theory provides strong support for the argument that we cannot accept a test that departs from intent, i.e. based simply on absolute non-interference, no economic sense, or full examination of the merits in each particular case. Accordingly, the assessment of algorithmic choices should follow a structured test, with a shifting burden of proof. While competitors or competition authorities would in the first instance need to demonstrate the existence of a differentiated treatment, defendants would bear the burden of justifying such difference. However, they would also benefit of a presumption of legality in case of compliance with industry due diligence, as discussed below.

¹²⁶ Stacey Dogan, ‘The Role of Design Choice in Intellectual Property and Antitrust Law’, 15 Columbia Technology Law Journal 27 (2016). Note that this list of approaches is not exhaustive. For instance, the European Commission’s approach in Google Shopping suggests a moderate degree of (non-) interference with design choices: the Commission brushed aside the efficiency defense raised by Google, according to which the algorithmic changes that they made improve the quality of the search service for consumers by providing them with “the most relevant and useful results possible”. The Commission contended that achieving those efficiencies cannot imply that Google Shopping is systematically favored. See Decision, para. 662.

¹²⁷ *Id.*, 61.

A vital consideration in this framework is the forum where these disputes would be settled. The utility of a court-based system (or even an administrative proceeding) to adjudicate these claims in a fast-moving environment as the one we are discussing in this contribution appears limited. Note for instance that the complaints in the *Google Shopping* case were lodged with the European Commission in November 2009, the investigation was officially launched in December 2010, and the decision was only taken in June 2017. For this reason, the proposal advanced in the previous section is to establish an alternative dispute resolution system that is able to look expeditiously into the merits of these complaints. Interestingly, as this paper was being written the EU has brought to light a proposed Regulation on Fairness in Platform to Business Relations,¹²⁸ which would require platforms both to provide an explanation for removal or demotion, and to institute a mechanism of alternative dispute resolution.

The procedure suggested here provides a further suggestion building upon the well-established model of notice and takedown, which has served as a useful compromise between platforms and content creators for almost two decades. This model is not without its flaws, especially in terms of discouraging voluntary content moderation measures for fear of triggering ‘knowledge’ of illegal activity.¹²⁹ For this reason, it was recommended to integrate into the model a due diligence procedure requiring the testing of algorithmic design choices before they are implemented. In our proposal, antitrust liability for algorithmic result is excluded for those providers that are compliant with this framework, i.e. (1) are able to demonstrate the testing and mitigation of possible bias in their algorithms; (2) have in place a dedicated procedure to receive notices of discriminatory treatment and respond timely with an explanation; and (3) submit to an independent dispute resolution system to resolve any controversy arising from such notices.

¹²⁸ Proposal on promoting fairness and transparency for business users of online intermediation services, COM(2018)238/974102. Available at https://ec.europa.eu/info/law/better-regulation/initiatives/com-2018-238_en.

¹²⁹ See e.g. the narrative in Danielle Citron and Quinta Jurecic, ‘Platform Justice: Content Moderation at an Inflection Point’, Hoover Institution Aegis Series Paper No. 1811, pp. 11-12.

While one could criticize the proposal for imposing significant costs on undertakings, it should be noted that the resources and expertise necessary for adherence to this framework may well be used (and to some extent already are) in other areas, for instance to deal with content moderation and claims of liability for third party conduct. Accountability for the results of algorithmic agents is one of the key regulatory challenges of the day, and it is here to stay. With that in mind, the global antitrust community has a responsibility to clarify the scope of the nascent antitrust duty to police one's own algorithm. This exercise should aim at ensuring a sufficient protection against unfair manipulation without undermining the incentives to invest and innovate in algorithmic technologies. A carefully designed safe harbor is the best way to achieve that balance.