PLAUSIBILITY, FACTS AND ECONOMICS IN ANTITRUST LAW

MARIATERESA MAGGIOLINO

«Just the facts ma'am:

competition cases are all about facts»[1]

ABSTRACT: According to EU competition law, the existence of an anticompetitive agreement can be inferred from a number of coincidences and indicia only *in the absence of another plausible explanation* of the facts at stake. According to U.S. federal law (antitrust law included), only *a complaint that states a plausible claim for relief* can survive a motion to dismiss at the pleading stage. What is plausible, however? After explaining the relationship between facts and evidence law, this chapter analyses the general meaning of the notion of plausibility, discusses the degree of discretion that it introduces, how it affects the justifications that judges and fact-finders make for their choices, and remarks on how this concept relates to substantial accuracy. On the other hand, the chapter acknowledges that antitrust law, by relating our understanding of what is plausible to economic models, debunks these concerns and raises another issue. Namely, since economics is rooted in various axioms and value-choices, the antirust link between plausibility, evidence standards and economics grants to these axioms and value-choices the possibility of affecting even antitrust decisions about facts, even though these decisions should amount to pure descriptions of the concrete facts.

SUMMARY:

1. Introduction

Currently, the notion of plausibility moulds some evidence standards that European and U.S. antitrust laws employ. Since economic theory strongly influences this concept, the chapter intends to remark that, by using the notion of plausibility, both jurisdictions allow economic theory to affect

[1] Ian Forrester, *A Bush in Need of Pruning: the Luxuriant Growth of "Light Judicial Review"* 410, in Claus-Dieter Ehlermann, Mel Marquis (eds), *European Competition Law Annual 2009: Evaluation of Evidence and Its Judicial Review in Competition Cases* (Hart Publishing, 2011).

even decisions about *facts*. This happens even though economics does not supply pure *descriptions* of how business facts really come about.[2]

In detail, for some years now the concept of plausibility has made its appearance in antitrust evidence law. In the European Union, the concept of plausibility lies beneath the standard of proof applying to cartels inferred from circumstantial evidence—decision-takers deem them proved only *in the absence of another plausible explanation* of the facts at stake (paragraph 3). In the United States, what is plausible underpins the standard of pleading holding in all federal cases—only claims showing *plausible grounds to infer an* unlawful conduct, such as an *anticompetitive agreement*, deserve to proceed (paragraph 4).

However, in its epistemic meaning, the notion of plausibility addresses what is compatible with our conception of how the world *normally* works and is *expected* to work (paragraph 5). Accordingly, since this form of extra-legal knowledge is somehow undetermined and uncertain, the concept of plausibility can undermine fact-finders' main duty: it can jeopardize their capacity to find which factual hypothesis out that of the plaintiff and that of the defendant corresponds to the facts as they actually are. In other words, the chapter acknowledges that, when plausibility acquires the status of a legal criterion for evidence standards, decisions about facts become, to some extent, risky and slippery (paragraph 6).

Nevertheless, within the boundaries of antitrust law, it is up to economic models to shape what is plausible, i.e. how the business world *normally* works and is *expected* to work. Hence, on the one hand, antitrust fact-finders do not enjoy a lot of discretion and, accordingly, their capacity to ascertain the actual facts is not badly undermined. On the other hand, we cannot overlook the fact that our economic conception of the business world also results from axioms and value-choices that, by definition, have little to do with facts (paragraph 7). Therefore, by accommodating these axioms and value-choices, the notion of plausibility allows antitrust decisions about facts to be distanced from *pure descriptions* of the disputed facts. In other words, due to the evidence standards that pivot around plausibility, economic theory does not only contribute to fixing the goals of antitrust law, interpreting its words and establishing which facts are material for the occurrence of violations. It plays a role even in determining which factual hypothesis out that of the plaintiff and that of the defendant can be accepted as true, even though we all know that economics is strongly normative (paragraph 8).

This chapter develops the above reasoning after briefly discussing the functions that standards of proof and standards of pleading play within evidence law (paragraph 2).

2. Evidence Law in a Nutshell: the Functions of Standards of Proof and Standards of Pleading

Any process of legal proof can be conceived of as a *cognitive* process whereby fact-finders expand their knowledge about the facts alleged by the parties via the collection of the best available evidence. In other words, if trials and administrative proceedings aim at uncovering the truth about the opposing factual hypotheses of the plaintiff and the defendant,[3] fact-finders must establish

[2] Here, when I use the word "description", I implicitly refer to the cognitive-rationalist approach according to which human beings are able, if not to distinguish between facts and values, to differentiate, at least, between assertive speeches and statements of fact on the one hand and prescriptive discourses and value judgments on the other hand. In the wake of this I hence use the word "descriptions" as well as the intensified expression "pure descriptions" to address those statements that regard just facts and that, accordingly, have nothing to do with normative choices. For the cognitive-rationalist approach *see, e.g.*, William Twining, *Theories of Evidence: Bentham and Wigmore*, 12 (Stanford University Press, 1986).

[3] *See, e.g.*, William Twining, *Rethinking Evidence. Explanatory Essays*, 73 (Cambridge University Press, 2006) and Susan Haack, *On Truth in Science and Law*, 73 *Brooklyn Law Review* 986 (2007-2008).

whether the disputed facts actually occurred and,[4] to this end, they cannot but look for the tracks and signs that those facts should have left.[5]

Proof rules govern this practice. For example, they control how fact-finders select and adduce evidence,[6] and how decision-takers assess the probative value of each of these pieces of evidence.[7] More, proof rules establish how and when decision-takers can achieve a conclusion about the disputed facts.

Standards of proof consist just of these latter decision-making rules. First, they accomplish an epistemic function. They (should) fix the *epistemic* conditions (say, also, the "verification criteria") under which decision-takers can utter, on the basis of the whole collected evidence, that the plaintiff has proved the factual hypothesis included in her claim. For example, a standard of proof for criminal cases could require decision-takers to accept the factual hypothesis if it: (i) explains, in a consistent way, the whole available evidence, (ii) is not *ad hoc*, and (iii) defeats all the other plausible defensive hypotheses which explain the same data that the plaintiff's claim explains.[8] In short, standards of proof (should) reel off the steps of the cognitive effort that decision-takers must endure to accept the facts alleged in the claim as verified.[9]

Nevertheless, current standards of proof often come in other shapes. In common law countries they consist of two fixed, though ambiguous, formulas—i.e. the "preponderance of the evidence" applying to civil cases and the "beyond a reasonable doubt" applying to criminal cases.[10] In civil law countries, however, authorities and courts do not even have any *ex ante* standardized decision-making rule to follow.[11] Rather, as EU courts do in connection to some antitrust offences,[12] they formulate the criteria under which they accept a claim as proved case by case.

Second, standards of proof accomplish a moral function. They change according to the interests at stake in a specific context, i.e. according to the *political* and *moral* sustainability of the mistakes

[4] In other words, fact-finders must show whether the hypothesis addressing the facts included in the claim—the so-called factual hypothesis—is proved, i.e. whether decision-takers can accept it as true. *See* Jordi Ferrer I. Beltran, *'It is Proven that p': The Notion of Proven Fact in the Law*, 29 (Duncker & Humblot, 2004), and Michael S. Pardo, *Pleadings, Proof, and Judgment: A unified Theory of Civil Litigation*, 51 *Boston College Law Review* 1451, 1470 (2010).

[5] When possible, fact-finders collect *direct evidence* of the alleged facts, that is to say, tracks capable of grasping the very same facts included in the claim, such as testimonies, records, tapes or written documents. More frequently, fact-finders gather *indirect/circumstantial evidence* of the claimed facts, that is to say, pieces of evidence portraying facts that, although different from the ones named in the claim, allow inferences as to the occurrence of the alleged facts.

[6] *See*, e.g., Dale A. Nance, *The Best Evidence Principle*, 73 *Iowa L. Rev.* 227 (1987-1988).

[7] Note that the well-known French criterion of the *intime conviction* and the similar Italian, German and Spanish criteria of the *libero convincimento*, *freie beweiswurdigung*, and *reglas de la sana critica* have a twofold function. First, they affirm the principle of the free evaluation of proof, which leaves decision-takers free to liberally assign a specific probative value to each piece of the evidence collected. Second, as we will see in the text, these principles leave decision takers free to determine liberally—i.e. without following any *ex ante* standard of proof—if the plaintiff has proved the factual hypothesis included in her claim. *See* Michele Taruffo, *Rethinking the Standards of Proof*, 51 *American Journal of Comparative Law* 659 (2003) and Fernando Castillo de la Torre, *Evidence, Proof and Judicial Review in Cartel Cases*, 32 *World Competition* 505 (2009).

[8] *See* Jordi Ferrer I. Beltrán, *La prueba es libertad, pero no tanto: una teoría de la prueba cuasi-benthamiana*, 20, http://www.derechoyjusticia.net/fr/actividades/ver/id/33.html (accessed May 13 2014).

[9] For this view, *see supra*, nt. 3. Furthermore, *see* Kiel Brennan-Marquez, *The Epistemology of Twombly and Iqbal*, 26 *Regent University Law Review* 167, 172 (2013) (discussing «the specific *cognitive* operation that plausibility analysis requires») emphasis added.

[10] In the United States, another standard of proof applies to special civil law cases—the «clear and convincing evidence» standard.

[11] *See*, Taruffo, *supra* nt. 6, p. 666.

[12] *See* the following paragraph 3 for some examples of decision-making rules that EU courts associate to specific cartel cases.

that a judicial decision can entail.[13] To be simple, there is no certainty as to disputed facts: any judicial decision may be wrong since even the best evidence available is not "perfect evidence", and since decision-takers may err because of both incorrect and unsound inferences. However—and just by way of example—all of society considers wrong criminal law decisions to be much worse than wrong civil law decisions because sending an innocent to prison is much more serious than making someone pay for damage that she did not cause. Therefore, with regard to error allocation, while the "beyond a reasonable doubt" standard reflects a strong preference for protecting criminal defendants, the "preponderance of the evidence" standard treats plaintiffs and defendants roughly equally.[14] To put it in another way, the "beyond a reasonable doubt" standard requires decision-takers to make almost maximum cognitive effort in order to accept the accusatory factual claim as proved. Differently, the "preponderance of the evidence" standard requires decision-takers to make the same cognitive effort either way, i.e. to either accept or reject the claim as proved.

In sum, standards of proof are decision-making rules which (i) require and entail a cognitive effort that, at the moment, no jurisdiction establishes in detail, and (ii) whose height changes according to the political and moral values that each jurisdiction endorses.

Standards of pleading, though, consist of procedural proof-rules. They apply to court cases and govern the way in which a lawsuit develops by controlling the number of cases allowed to go through the diverse phases of the litigation—roughly, pleading, discovery and trial. Namely, standards of pleading serve to select claims that deserve to move at least toward the pre-trial stage. As a consequence, these standards result from the tension between opposite needs and wants: on the one hand, concerns for access to courts, participation values and meritorious lawsuits; on the other hand, worries about saving judicial resources, in terrorem settlements and meritless lawsuits.[15]

Clearly then, if we want lawsuits to work as inherently consistent mechanisms aimed at uncovering the truth about the opposing factual hypotheses of the plaintiff and the defendant, we should consider standards of pleading not totally detached from standards of proof.[16] In other words, standards of pleading should dialogue with the specific standards of proof applying to the cases at stake, so as to reject claims that, even when further scrutinized, would have no chance of surviving the applicable standard of proof. For example, in civil cases, where the "preponderance of the evidence" standard applies, the chosen standard of pleading should be capable of rejecting claims that, after being tested, would turn out to be as probable (in epistemic terms) as the opposing defences. In short, standards of pleading should work as alignment mechanisms. Intuitively enough, however, the problem lies in discovering a verification criterion, *other than from epistemic probability*,[17] that should be included in the standard of pleading formula so as to facilitate the achievement of this result.

However, we should not push this argument too far. Broadly speaking, a plaintiff wins when she proves that her specific case coincides an abstract case which the law qualifies as unlawful. From the outset, hence, a claimant has two options which are independent from the verification criteria included in the applied standard of pleading. The plaintiff either manages to subsume her particular case in the abstract one or runs the risk of having her claim rejected because it is incomplete.

---

[13] What said in the text briefly describes the political and moral soul of standards of proof. See, in this regard, Ernest van den Haag, *On the common saying that it is better that ten guilty persons escape than that one innocent suffer: pro and con*, 7 *Social philosophy and policy* 226 (1990); Alex Stein, *Foundations of Evidence Law*, 144 (Oxford University Press, 2005).

[14] *See*, e.g., David H. Kaye, *Clarifying the Burden of Persuasion: What Bayesian Decision Rules Do and Do Not Do*, 3 *Int'L J. Evidence & Proof* 1 (1999), and Ronald J. Allen, *The Error of Expected Loss Minimization*, 2 *Law Prob. & Risk* 2 (2003).

[15] *See* Lawrence B. Solum, *Procedural Justice*, 78 *S. Cal. L. Rev.* 181, 237–73 (2004) and Andrew I. Gavil, *Civil Rights and Civil Procedure: The Legacy of Conley v. Gibson*, 52 *How. L. J.* 1,4 (2008).

[16] *See, e.g.*, Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252 (1986).

[17] Indeed, we can associate a degree of epistemic probability with a factual hypothesis only after testing it.

3. Plausibility and the EU Standards of Proof for Cartels

Looking at EU competition law, the US formulas of "beyond a reasonable doubt" and the "preponderance of the evidence" cannot be found. EU expressions such as the «requisite legal standard»[18] result only from the effort to reconcile the diverse legal traditions that converge in the EU experience. They amount to *ex post* constructs that should sound well in the ears of common law commentators.[19]

Indeed, many antitrust scholars complain about the lack of these US-like standards of proof in EU competition law. Although the ambiguous US formulas end up indicating the sole degree of persuasion that decision-takers must achieve before reaching final decisions,[20] these scholars would like the Commission to adopt some *ex ante* decision-making rules so as to govern its discretion and guarantee more certainty and predictability.[21] On the other hand, other scholars maintain that the Commission does not need to use US-like standards of proof because it already complies with the continental approach, which pivots around other *ex ante* formulas such as those regarding the features that "good evidence" should have[22] and the «firm conviction» that decision-takers should achieve.[23]

Actually, the mere fact that the EU Commission follows the tradition of civil law countries does not mean that it does not adopt decision-making rules or that these rules are gratuitous. For example, many scholars have shown how these rules change according to some (even opposing) criteria, such as the severity of the imposed fines and the need not to neutralize the deterrent effect of antitrust offences that, in some circumstances, become difficult to prove.[24] What is more, we know that in cartel cases the Commission applies two diverse standards depending on the collected evidence.

---

[18] *See, e.g.*, Case C-70/12 P, *Quin Barlo and others v Commission*, not yet published, § 29; Case C-202/07, *France Telecom v Commission*, [2009] ECR I-02369, § 5; Case C-185/95 P *Baustahlgewebe* v *Commission* [1998] ECR I-8417, § 58, and Case C-49/92 P *Commission* v *Anic Partecipazioni* [1999] ECR I-4125, § 86.

[19] *See, e.g.*, Eric Gippini-Fournier, *The Elusive Standard of Proof in EU Competition Cases*, 33 *World Competition* 187 (2010) and Fernando Castillo de la Torre, *supra* nt. 6.

[20] *See, e.g.*, Michael S. Pardo, *Second Order Proof Rules*, 61 *Florida Law Review* 1083, 1091 (2009).

[21] *See, e.g.*, Paul Craig, *EU Administrative Law*, 470-471 (Oxford University Press, 2006); Bruno Lassere, *The European Competition Law Enforcement System* 71, in Claus-Dieter Ehlermann, Mel Marquis (eds), *European Competition Law Annual 2009: Evaluation of Evidence and Its Judicial Review in Competition Cases* (Hart Publishing, 2011); James S. Venit, *Human All Too Human: The Gathering and Assessment of evidence and the Appropriate Standard of Proof and Judicial Review in Commission Enforcement Proceedings Applying Articles 81 and 82* 193, in Claus-Dieter Ehlermann, Mel Marquis (eds), *European Competition Law Annual 2009: Evaluation of Evidence and Its Judicial Review in Competition Cases* (Hart Publishing, 2011); and David Bailey, *Standard of Proof in EC Merger Proceedings: A Common Law Perspective*, 40 *Common Market Law Review* 848 (2003).

[22] Consider, for example, the expressions requiring evidence and proof to be «sufficiently precise and coherent», «sufficiently precise and consistent», «sufficiently cogent and consistent», and «factually accurate, reliable and consistent». *See, e.g.*, Case C-29 e 30/83, *CRAM e Rheinzink v Commission*, [1984] ECR 01679 § 20; Case, C-68/94 e C-30/95, *France et al. v Commission (Kali und Salz)*, [1998] ECR I-01375, § 228; and Case C-12/03 P, *Commission v Tetra Laval*, [2010] ECR I-00067 § 39.

[23] *See, e.g.*, Case T-67/00, T-68/00, T-71/00 and T-78/00, *JFE Engineering and others v Commission*, [2004] ECR II-02501 § 179, and Case T-28/99, *Sigma Tecnologie v Commission*, [2002] ECR II-01845, § 51.

[24] *See, e.g.*, Anne L. Sibony, *Le juge et le raisonnement économique en droit de la concurrence*, L.G.D.J. 749 (2008); Bailey, *supra* nt. 20, p. 866; Heike Schweitzer, *The European Competition Law Enforcement System and the Evolution of Judicial Review*, in Claus-Dieter Ehlermann, Mel Marquis (eds), *European Competition Law Annual 2009: Evaluation of Evidence and Its Judicial Review in Competition Cases* (Hart Publishing, 2011); Koen Lenaerts, *Some Thoughts on Evidence and Procedure in European Community Competition law*, 30 *Fordham International Law Journal* 1463, 1494 (2007); Tony Reeves, Ninette Dodoo, *Standards of proof and standards of judicial review in EC Merger Law* 127, in Barry Hawk (ed), International Antitrust Law and Policy (New York, 2006); Forrester, *supra* nt. 1, p. 417; and Venit, supra nt. 20, p. 245.

When documents which directly establish the existence of concertation exist, there is no need to further examine the question of the existence of the alleged anticompetitive agreement.[25] Where the Commission succeeds in gathering documentary evidence in support of the alleged infringement, and where that evidence appears to be sufficient to demonstrate the existence of an agreement of an anti-competitive nature, there is no need to examine the question of whether the firms concerned had another justification for taking part to the agreement.

Instead, when the only available evidence is circumstantial, the decision rule that the Commission adopts to establish whether a cartel occurred is that of the absence of another *plausible* explanation.[26] To put it in another way, if the facts at stake cannot be explained other than by the existence of anticompetitive behaviour, the Commission can hold the firms liable. However, when firms can put forward arguments which cast those facts in a different light and thus allow another plausible explanation of them, the Commission has not met the standard of proof. This means that, in order to establish the fact that a cartel happened, this factual hypothesis must defeat any other factual plausible hypothesis asserting that no cartel took place.

What is a plausible explanation of the disputed facts, though? Does a plausible explanation of those facts differ from a possible or a probable explanation of them? Interestingly enough, some recent decisions by the US Supreme Court induce similar questions about the notion of plausibility.

4. Plausibility and the US Standards of Pleading

Rule 8 of the Federal Rules of Civil Procedure establishes that a plaintiff's complaint must contain «a short and plain statement of the claim showing that the pleader is entitled to relief».[27]

In 1957, in *Conley v. Gibson*,[28] the US Supreme Court clarified that a complaint served to «give the defendant fair notice of what the plaintiff's claim is and the grounds upon which it rests».[29] Therefore, a complaint was to be dismissed only when it appeared «beyond doubt that the plaintiff can prove *no set of facts* in support of his claim which would entitle him to relief».[30] Differently, a plaintiff introducing a correct theory of harm about the illegality of a practice that *might* have occurred deserved the opportunity to prove her claim during the lawsuit. In short, *Conley* established the so-called "no set of facts" standard, which judges applied from then on.

However, in the recent *Twombly* and *Iqbal* cases,[31] the Supreme Court changed its view, requiring enough factual specificity to make the plaintiff's claim plausible. In *Twombly*—an antitrust decision about an alleged anticompetitive agreement—the Court did not define what plausibility means but elaborated several expressions to describe this concept. Namely, the Court wrote that: (i) in order to proceed, a complaint must «raise a right to relief above the speculative level»,[32] (ii) the new standard of pleading must «not impose a probability requirement at the pleading stage» because «a well-pleaded complaint may proceed even if it strikes a savvy judge that actual proof of [the facts

[25] *See, e.g.*, Joined Cases C-403/04 P and C-405/04 P, Sumitomo Metal Industries Ltd, Nippon Steel Corp., [2007] ECR I-00729, §§ 46 and 70.
[26] *See, e.g.*, Case C-53/03, *BPB plc*, [2005] ECR I-04609 §63; Joined cases C-204/00 P, C-205/00 P, C-211/00 P, C-213/00 P, C-217/00 P and C-219/00 P., *Aalborg Portland and Others* v *Commission*, [2004] ECR I-00123, § 165; Case C-105/04 P *Nederlandse Federatieve Vereniging voor de Groothandel op Elektrotechnisch Gebied* v *Commission* [2006] ECR I-8725, § 94; and Joined Cases C-89/95, C-104/85, C-114/85, C-116/85, C-117/85 and C-125/85 to C-129/85 *Ahlström and Others* v *Commission* [1993] ECR I-1307, §§126 and 127.
[27] Fed. R. Civ. P. 8(a)(2).
[28] *Conley v. Gibson*, 355 U.S. 41 (1957)
[29] Id., at 47.
[30] Id., at 45-46 (enphasis added).
[31] Respectively, *Bell Atlantic v Twombly*, 550 U.S. 544 (2007), and *Ashcroft v. Iqbal*, 556 U.S. 662 (2009).
[32] 550 U.S., at 555.

alleged] is improbable»,[33] and (iii) allegations must cross the lines between «possibility and plausibility»,[34] and between what is «factually neutral» and what is «factually suggestive».[35] Furthermore, in *Iqbal*—which was not an antitrust case—the Court repeated that the pleading must include enough factual details to enable the court to «draw the reasonable inference that the defendant is liable for the misconduct alleged»,[36] and it cannot plead facts that are «merely consistent with a defendant's liability» because in so doing «it stops short of the line between possibility and plausibility of 'entitlement to relief'».[37]

In sum, in the above cases the Supreme Court (similarly to the present European Court of Justice) did not define the notion of plausibility directly but confronted it with the concepts of speculations, possibility and probability. More, the Court tried to establish a link between the notion of plausibility and the number and quality of factual details that a pleading must contain.

Therefore, moving on from both the EU and US experiences, there is room to look for a more direct and clear definition of what plausibility means.

5. A General Definition of What Plausibility Is

Among epistemologists, the concept of plausibility has not triggered much interest yet. Nevertheless, due to the above legal functions that European and U.S. courts now give it, defining its general meaning deserves a try—even a preliminary one—in order to then appreciate its legal nuances. In particular, since the notion of plausibility is often confronted with the concepts of possibility and probability, let us start from these two latter.

It is by tradition that, primarily, we define what is possible as what is "not-impossible"[38] and, next, we distinguish between logical and empirical impossibilities.[39] *Logical impossibility* addresses what amounts to a "contradiction in terms"—i.e. to what is necessarily false to a person who knows no facts but who is capable of reasoning and well acquainted with the senses of the words combined together to assert *p*.[40] Differently, *empirical impossibility* addresses what is contrary to the scientific and technical rules that govern a given scenario, so that the sentence "it is empirically impossible that *p*" means that a person cannot say that *p* is true on the basis of the data and laws relating to that scenario.[41] Therefore, whatever is neither self-contradictory nor contrary to the rules of nature and technique applying to a given scenario constitutes a logical and empirical possibility. In short, what is possible is not a matter of degree—*p* is either possible or impossible according to a well-identified and grounded benchmark, that is, the laws of logic together with those of nature and technique.

Differently, the concept of probability is not a categorical concept. The sentence "it is probable that *p*" is a matter of degree—it turns on the quantitative question of how likely it is that *p* holds true. Granted that *p* is either possible or impossible, when *p* is impossible, the probability of *p* is zero. When *p* is possible, *p* may be more or less probable. Then, it is again by tradition that we know that

[33] *Id.*, at 556.
[34] *Id.*, at 557.
[35] *Id.* at 557 n.5.
[36] 556 U.S., at 663.
[37] 556 U.S., at 678.
[38] *See, e.g.*, Aristotle, *De Interpr.*, 13 22b 28, William of Ockham, *Summa Log.*, II, 25 and Rudolf Carnap, *Meaning and Necessity*, § 39-3.
[39] *See*, also, Panayot Butchvarov, *The concept of possibility*, 20 *Philosophy and Phenomenological research* 318 (1960).
[40] *See, e.g.*, Pierce Collected Papers, § 4.67, working in the wake of the traditional definition of logical impossibility that can be traced back to Aristotle, *Metaphysics*, ed. W.D. Ross, Oxford, Clarendon Press (1924) V12, 1019 b 30.
[41] See, *e.g.*, Pierce Collected Papers, § 4.67, and Hans Reichenbach, *Verifiability theory of meaning* 53, in PROCEEDINGS OF THE AMERICAN ASSOCIATION OF ARTS AND SCIENCES (1951).

the concept of probability may assume diverse meanings.[42] It can specify the observer's personal belief in *p*, i.e. her *subjective probability*. It can measure the *frequency* or *propensity* of *p* when it indicates how many times *p* either has happened in a time interval in the past or is going to happen in a time interval in the future. Finally, "it is probable that *p*" may clarify the degree/level of corroboration that supports *p*. In this latter case, we talk about *epistemic probability—p* can be more or less probable in epistemic terms because *p* can be more or less well-supported according to the evidence available in the case at stake.[43] Therefore, if you say that *p* is probable in epistemic terms, you mean that you have evidence supporting it *and* you know that, if you collect enough evidence to meet the chosen decision-making rule (which, within the process of legal proof, is the chosen standard of proof) you will accept *p* as true.

Now, in relation to the notion of plausibility, there is room to argue that, unlike probability and like possibility, it is not a matter of degree. It amounts to a categorical concept, so that *p* is either plausible or implausible, and what is plausible may be more or less probable.[44]

In addition, we know that, while looking for a description of a phenomenon, the sentence "it is plausible that *p*" conveys the idea that *p* deserves further analysis because, prima facie, it can be taken more seriously than its alternatives—i.e. the other possible descriptions of the events that led to the regarded phenomenon.[45] In this context, hence, the concept of plausibility works as a selection criterion, i.e. like a threshold to screen out some possibilities that, in common parlance, are indeed addressed as "mere possibilities" or "pure speculations".

However, this latter definition of plausibility has a mere *pragmatic meaning* that, though correct and totally sharable, does not say what makes *p* plausible, i.e. what justifies the idea that *p* is plausible. In other words, knowing that you take what is plausible more seriously than what is possible does not explain *the reasons why* you made such a choice and, as a consequence, does not allow someone else to judge whether you were right in considering *p* more seriously than the other possibilities. For example, did you consider *p* plausible because *you* expected *p* to be true? Or because *p* is expected to be true irrespective of your point of view?[46] Also, on the basis of what elements and cognitive process did you achieve your conclusion? On the basis of your intuition or on data? By making a comparison among the alternatives[47] or in absolute terms? In sum, we miss an epistemic definition of the concept of plausibility that, as such, could be used even outside the context of hypothesis selection.

---

[42] *See*, *e.g.*, Maria Carla Gavalotti, *Philosophical Introduction to Probability* (CSLI Publications, 2005).

[43] As a consequence, when turning to epistemic probability, the use of numbers and percentages is just a rhetorical solution to signal how well-supported a factual statement is.

[44] *See* Brennan-Marquez, *supra* nt. 8, p. 180.

[45] Collected Papers of Charles Sanders Pierce, ed. Charles Hartshorne and Paul Weiss, Harvard University Press, 1932, II, § 662.

[46] *See*, in this regard, Brennan-Marquez, *supra* nt. 8, p. 177 talking about a case where a husband decides to test the hypothesis of his wife's betrayal, not because he believes that it is true but because he considers that hypothesis compatible with a normal explanation of some factual elements that he has discovered.

[47] Actually, if you define what is plausible by comparing it to the formulated alternatives, you elaborate an endogenous definition of plausibility—what is plausible will vary according to the alternatives against which it is compared and just one single hypothesis is plausible among the alternatives. *See*, in this regard, Gilbert Harman, *The Inference to the Best Explanation*, 74 *Philosophical Review* 88 (1965); Paul R. Thagard, *The best explanation*, in 75 *The Journal of Philosophy* 76 (1978); Peter Lipton, *Inference to the Best Explanation*, in W.H. Newton-Smith (Ed.), *A companion to the Philosophy of Science* (Blackwell, 2000); John R. Josephson, *On the proof dynamics of inference to the best explanation*, in 22 *Cardozo Law Review* 1621 (2000-2001); Michael S. Pardo, *The field of evidence and the field of knowledge*, 24 *Law & Phil*. 321 (2005); and Ronald J. Allen, *Factual Ambiguity and a Theory of Evidence*, in 88 *Nw. Ul. L. Rev.* 604 (1993-1994). Differently, in this paper I am assuming that the touchstone for establishing whether *p* is plausible is an exogenous element. Therefore, as said before, plausibility is a categorical concept and, at the same time, more than one hypothesis can be plausible.

In this regard, although no definitive word can be spoken, there is room to argue that "it is plausible that *p*" means that *p* does not conflict with our own conceptualization of how the world *normally* is—that is to say, with what we consider to be a *usual* (say, also, an *ordinary* or *natural*) description of the scenario under scrutiny.[48] In other words, the notion of plausibility hinges on individuals' conception of how the world is, granted that there is no single idea of the world that individuals share by definition, and that each individual's conception of the world results, by and large, from an unknown and uncontrolled mixture of many and diverse elements, running from facts, scientific laws and correct generalizations to experiences, beliefs, prejudices and even commonplaces.

As a consequence, plausibility has a quite subjective flavour that the notions of possibility and epistemic probability do not have.[49] In addition, the mere fact that *p* is plausible does not say anything about whether *p* is actually true or false. In this sense, hence, there is no difference between the notions of possibility and plausibility. If you say that *p* is plausible, you mean that *p* can be either true or false *and* you know that only a test will reveal whether *p* can be accepted as true or rejected as false. The difference between possibility and plausibility rests, instead, on the term of comparison that you choose to make your assessment: what is possible does not contradict what we have above called "a well-identified and grounded benchmark", i.e. the laws of logic, nature and technique that together govern the scenario under scrutiny. What is plausible, in contrast, does not contradict what *you* consider to be *normal* and *ordinary* in that same scenario. To be sure, if your idea of what is common in a specific scenario depends on facts, scientific laws and correct generalizations, the notions of possibility and plausibility arguably converge. More, in this specific hypothesis there is even room to argue that the concept of plausibility consists of a sort of esteeming of the epistemic probability that we will associate with *p* after having tested it.[50] Nonetheless, if your conceptualization of how the world normally is also impinged on by experiences, beliefs and commonplaces, plausibility addresses something different from possibility and does not consist of reliable esteeming of the epistemic probability of the factual hypothesis at stake.

This latter difference is not a minor one, especially when plausibility becomes a legal criterion employed within evidence standards that directly and indirectly select the factual hypothesis that fact-finders accept as true.

6. Plausibility as a Legal Criterion

When the concept of plausibility becomes a legal criterion for defining standards of proof and pleading, judges and fact-finders are induced to move outside the four corners of the complaint that lies in front of them.[51] In other words, since the notion of plausibility commands them to establish whether *p* is compatible with their own conceptualization of how the world normally works, judges and fact-finders are required to mirror a mixture of elements that is "extra-legal" for at least two reasons. First, because it does not necessarily regard statutes, legal rules and other species of legal

[48] *See, e.g.*, Robert Bone, *Twombly, Pleading Rules, and the Regulation of Court Access*, 94 *Iowa L. Rev*. 873, 885-87 (2009); Edward Hartnett, *Taming Twombly, Even After Iqbal*, 158 *U. Pa. L. Rev*. 473, 500 (2010); and Thagard, *supra* nt. 46, p. 79.

[49] To be sure, to argue that p is better supported than q requires a subjective judgment. Nevertheless, the very same idea of epistemic probability requires that such a judgment is rooted in evidence—better, in a form of evidence that is more verifiable than that unique mixture of diverse elements that forms individuals' conceptualization of the world.

[50] *See, e.g.*, Robert T. Harris, *Plausibility in Fiction*, 49(1) *The Journal of Philosophy* 5, 6-7 (1952), who argues that «the plausibility of a hypothesis is perhaps nothing more than *a* general feeling associated *with an* estimating *by* intellect *of the* hypothesis' antecedent probability». His reasoning works in connection to «scientific predictions and practical foresight» in a context where «the plausibility of a hypothesis … depends on data … easily traceable and … directly relevant to presentations of sense».

[51] *See*, Brennan-Marquez, *supra* nt. 8, p. 203.

content; second, because this mixture of cognitive elements comes from outside the lawsuit or proceeding that they are presiding over.[52]

Now, some consequences follow from this. First, it is hard to establish the facts that a plaintiff should allege so as to make her claim not only possible but also plausible. In short, once used as a legal criterion, the notion of plausibility introduces a certain degree of discretion and indeterminacy[53] because plaintiffs cannot guess what their specific judges and fact-finders may deem to be plausible.

Second, under the veil of plausibility it is hard to detect the exact reasons why judges and fact-finders consider *p* plausible and, as a consequence, it is hard to judge whether their decisions are correct and sound.

Third, in the absence of any further specification, nothing excludes judges and fact-finders considering *p* plausible because of their own experiences and beliefs or even because of some commonplaces. This latter possibility is risky, especially when we want lawsuits and proceedings to establish which of the factual hypotheses of the plaintiff and defendant corresponds to the actual facts. In general, indeed, experiences, beliefs and commonplaces are bad tools not only for selecting the claim that, after due testing, would result in a factual hypothesis that can be accepted as true but also (and *a fortiori*) for assessing whether the accusatorial version of the facts must be accepted as proved. To be sure, in this last regard some clarification is due. In terms of standards of proof that pivot around plausibility, we must distinguish between two different scenarios. Suppose that your standard of proof says: "accusatorial hypotheses must be accepted as true when they are plausible". In this case, as long as the reasons why *p* is plausible do not have anything to do with a shared vision of the world which is rooted in scientific laws we run the risk of considering something proved that is devoid of grounding and corroboration. In contrast, consider the case of a standard of proof that establishes that "in order to be accepted as true, the factual accusatorial hypothesis must defeat any plausible defensive hypothesis". In this particular scenario, the required cognitive effort could be very high: even a commonplace would prevent us accepting as true the accusatorial hypothesis. In other words, subordinating the acceptance of a charge to refusing all plausible explanations that favour defendants would require an almost maximum cognitive effort and, as a consequence, would be consistent even with the presumption of innocence principle that, for example, holds in criminal cases. Indeed, many scholars use the notion of plausibility in this way just to interpret the "beyond a reasonable doubt" standard.[54]

In summary, the general notion of plausibility used as a legal criterion within evidence standards urges some concern over the real capability of trials and administrative proceedings to achieve a true description of the concrete facts in dispute. Hence, the time is ripe to discuss whether these risks remain the same when it comes to antitrust evidence standards.

7. Plausibility as a Legal Criterion within Antitrust Law

Within the boundaries of competition laws, economic theory is called on to *describe* the world in which antitrust law has to intervene. In other words, antitrust scholars and enforcers assume that

[52] [Going back to our example – have you used this alligator example before somewhere?], suppose that the owner of the shop whose window was crashed by an alligator acted for damages against a Voodoo priestess, alleging that she is the owner of the beast. Is this claim plausible? Everything depends on whether judges believe that alligators that roam around New Orleans belong to people somehow involved in Voodoo rituals.

[53] *See, e.g.*, David L. Noll, *The Indeterminacy of Iqbal*, 99 GEO. L.J. 117, 138–41 (2010); Bone, *supra* nt. 47, at 887; Michael Pardo, *Pleadings, Proof, and Judgment: A unified theory of civil litigation*, 51 Boston College Law Review 1451, 1461(2010).

[54] See, e.g., Josephson, *supra* nt. 46, p. 1642 and Ronald J. Allen, *Rationality, Algorithms and Juridical Proof: A Preliminary Inquiry*, 1 *Int'l J. Evid. & Proof* 254 (1997).

economics is "the" (social) science that illustrates how markets work and are expected to work.[55] As a consequence, there is room to argue that antitrust scholars do not have to worry about the above concerns that the notion of plausibility introduces:[56] they can feel comfortable in considering that what «makes no economic sense» is implausible.[57]

Plaintiffs do not have to guess judges' and authorities' normal conception of how the world works—they know that this conception derives from economic theories and models.

In addition, judges have no problems in finding materials to justify their economic vision of how the world normally is because economics provides them with many theoretical and empirical studies that make their legal decisions reliable. Just to mention some examples, in the above-mentioned *Twombly* case Justice Souter elaborated on his conclusion by relying on eight economic theoretical and empirical studies about how firms behave in oligopolistic markets.[58] Also, in one of the first EU cases about parallel conduct, the *Ahlström* case, the European Court of Justice relied on the opinion of economic experts to reject the Commission's explanation of parallel conduct.[59]

Finally, in relation to the risk of substantial inaccuracy that "general plausibility" introduces, we should debunk this in relation to antitrust law because economics amounts to a (social) science that has among its main tasks that of describing business behaviours and market functioning. As a consequence, the probability that a standard of pleading pivoting around antitrust plausibility would reject would-be grounded claims is very low. Likewise, the risk that a standard of proof impinging on plausibility leads to false descriptions of business facts is minimal in both cases of standards of proof that consider what is plausible to be proved and, *a fortiori*, in cases of standards of proof that consider as proved what defeats plausible alternative hypotheses.

Accordingly, we should not have doubts as to the substantial accuracy of the EU standard of proof that the Commission applies to cartels inferred from circumstantial evidence. This specific decision-making rule, indeed, requires us to accept as proved the hypothesis of the existence of a cartel only when there is no economically meaningful explanation of the facts at stake that excludes the possibility that firms had the same ideas in their business practices. Therefore, in the case of parallel practices happening in concentrated markets, it is clear that the Commission will not meet the standard of proof when perfect interdependence is plausible, i.e. when perfect interdependence can explain parallelism.

Likewise, the *Twombly* pleading standard does not jeopardize judges' capacity to find out the facts as they actually occurred—it does not deprive of relief US antitrust plaintiffs that have actually suffered damage. By asking these plaintiffs to write plausible pleadings, the *Twombly* standard only avoids wasting time and material resources on pleadings that, during the subsequent phases of the lawsuit, would not survive a motion for summary judgment[60] or meet the "preponderance of the evidence" standard. In general terms, indeed, no reasonable jury could find facts in support of an accusatorial factual hypothesis that is economically senseless and, in a trial, the same accusatorial factual hypothesis could not find any corroboration if not compatible with economics, i.e. could not have an epistemic probability higher than the epistemic probability of the contrasting defensive factual hypothesis, especially if this latter were plausible.

In short, if economics indicates how the business world works and is expected to work, antitrust judges and authorities do enjoy a *shared vision* of the world that, in addition, does not amount to an

[55] *See, e.g.*, Herbert Hovenkamp, *The Rationalization of Antitrust*, 116 *Harv. L. Rev.* 917 (2003).
[56] Brennan-Marquez, *supra* nt. 8.
[57] See, e.g., *Matsushita v. Zenith Ratio Corp*., 475 U.S. 574 (1986).
[58] 550 U.S. 555-570.
[59] Case C-89/85, Ahlström Osakeyhtiö v. Comm'n, [1993] ECR I-01307, §§ 121-125.
[60] The standard for granting summary judgment works after an adequate period of discovery and screens the specific claims and defences that, since they are factually unsupported, must be terminated before the trial stage.

unknown and uncontrolled mixture of experiences and commonplaces but results from the rigorous elaboration of tested models and theories. Hence, we can argue that, differently from "general plausibility", *antitrust plausibility* does not entail a significant degree of discretion and indeterminacy, a lack of justification on the part of decision-takers or a serious risk of mistakes.

Yet, we should not push the above arguments too far.

Economics is not a perfect science—we cannot *fully* rely on it because economic theories and models can also be incorrect and unsound. In particular, if the considered economic model is unsound, a factual hypothesis that does not make economic sense could actually describe facts that have actually occurred. Nevertheless – truth be told – the *Twombly* court was aware of this possibility when it referred to *Matsushita* and to the idea that a plaintiff can always support a prima facie implausible claim by adducing more persuasive factual allegations that may turn an implausible claim into a plausible one.[61]

Furthermore, even setting aside any questions about the *reliability* of economic models and theories, economics is not a hard science that provides *pure* descriptions of the world. Generally, economic theses about the functioning of the business world are rooted in normative choices[62] such as: (i) axioms about human beings' rationality, (ii) unproven assumptions regarding the self-correcting nature of markets, (iii) value judgments about the importance of efficiency gains, and (iv) policy choices relating to the social costs of some government forms of action outside antitrust law.

Therefore, we can have – and we do have – many economic visions of the world that, in addition, give significant leeway to untested and non-verifiable hypotheses and value judgments.[63] Accordingly, as long as plausibility shapes antitrust standards of pleading and proof, the factual hypotheses selected to be tested and accepted as true also depend on these unverifiable and value-based choices. In other words, when plausibility is called on to shape the above standards, economic theories and models are called on to play a role in the process of proof and, as a consequence, the axioms and value assumptions underpinning these theories and models affect even the factual analysis that antitrust judges and authorities carry out. This introduces a sort of *ex ante* risk of substantial inaccuracy that rests with axioms and value assumptions that, by definition, have nothing to do with pure descriptions of the real world.

8. A further role for economics within antitrust law

We usually think that economics may play a twofold role within the realm of antitrust law.

First, economics may answer some *policy* questions by fixing the goals that antitrust provisions should pursue. Many antitrust scholars, indeed, still maintain that competition law should protect the good functioning of the market and, hence, total welfare (or, at least, consumer welfare) in lieu of other interests – the so-called non-economic interests – such as fairness and justice.[64]

---

61 *See*, 475 U.S. 574.

62 *See, e.g.*, William H. Page, *Ideological Conflict and the Origins of Antitrust Policy*, 66 *Tulane Law Review* 1 (1991); Michael S. Jacobs, *Essay on the Normative Foundations of Antitrust Economics*, 74 *North Carolina Law Review* 219 (1995); David B. Audretsch, *Divergent Views in Antitrust Economics*, 3 *The Antitrust Bulletin* 33; and Spencer Weber Waller, *Market Talk: Competition Policy in America*, 22 *Law & Social Inquiry* 435 (1997); John E. Lopatka and William H. Page, *Economic Authority and the Limits of Expertise in Antitrust Cases*, 90 *Cornell L. Rev.* 637 (2004-2005).

63 Think, for example, of the many schools that form antitrust law. Each of them has, beyond a technical, a political soul. *See*, in this regard, Mariateresa Maggiolino, *Intellectual Property and Antitrust. A comparative economic analysis of US and EU Law*, ch. 1, (Edward Elgar, 2011).

64 The literature on this topic is huge. *See*, *ex multis*, Stephen Martin, *The Goals of Antitrust and Competition Policy*, 2007, available at <http://www.krannert.purdue.edu/faculty/smartin/vita/Goals0707Cmu.pdf.> (last access July 29, 2014).

Second, economics may contribute to *interpreting* antitrust provisions. In particular, sometimes some economic concepts, such as "market power"[65] or "interdependence", [66] directly imbue with meaning some ambiguous legal expressions, such as "dominant position" or "concerted practice". At other times – better, in the great majority of times – economics designs the exact boundaries of antitrust prohibitions by indicating the circumstances in which a "restriction of competition" happens. Indeed, once antitrust law protects total or consumer welfare, it is up to economic models – and, in particular, to the hypotheses of industrial organization models – to indicate the conditions under which a specific practice has a net negative impact on total/consumer welfare. It is not by chance that among antitrust scholars "theory of harm" is a quite frequent expression just because it embraces those economic conditions deriving from an economic model that must be met so to show that antitrust restriction is in place.[67]

However, economics may play a further role within antitrust law—a role that has nothing to do with policy or interpretation but regards facts. Namely, we firstly know that the antitrust version of the notion of plausibility addresses the way in which economics describes – or is said to describe – the facts of the business world. Secondly, we know that: *(i)* standards of proof should reel off the verification criteria that decision takers must meet to accept the facts alleged in a plaintiff's claim as proved, and *(ii)* standards of pleading should contain the verification criteria necessary to reject claims that, even when further scrutinized, would have no chance of surviving the applicable standard of proof. As a consequence, once the notion of plausibility becomes a verification criterion, we must conclude that the way in which economics describes the facts of the business world becomes "the" benchmark for saying whether: *(i)* the disputed facts occurred, and *(ii)* the allegations would never be considered as proven, even after the process of legal proof was carried out.

Now, given that economics is not physics, from a theoretical standpoint what is problematic is the possibility that a mixture of axioms, value choices and descriptive elements influences a kind of decision-making that, for the sake of rigour, should be only a matter of facts, i.e. should be deprived of any normative flavour.

9. Conclusions

The notion of plausibility addresses what is compatible with the normal conceptualization of the world. In this general meaning, hence, it is highly context-specific[68] and, as a consequence, makes room for discretion, lack of justification and substantial inaccuracy. In antitrust law, plausibility acquires a specific meaning that minimizes these shortcomings: it addresses what is compatible with economics. In contrast, this specific notion of plausibility highlights another problematic issue, that is, that antitrust law allows economics to mould decisions about facts, despite the fact that economics results from normative choices.

[65] The antitrust literature is also widespread on this top. *See, ex multis*, Ioannis Lianos, *'Lost in Translation': Towards a Theory of Economic Transplants*, 2009, available at (last access July 24, 2014).
[66] *See, e.g.*, Federico Ghezzi, Mariateresa Maggiolino, *Bridging EU Concerted Practices with U.S. concerted actions*, forthcoming in *Journal of Competition Law & Economics* (2014).
[67] *See, e.g.*, Herbert Hovenkamp, *Fact, Value And Theory*, 1987 *Duke Law Journal* 901 (1987).
[68] *Iqbal v. Hasty*, 490 F. 3d 143, 157-158 (2nd Circ. 2007).