

EFFICIENT PENALTY CLAUSES WITH DEBIASING:
LESSONS FROM COGNITIVE PSYCHOLOGY

by

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ABSTRACT

This paper builds upon the findings of cognitive psychology to revisit the prescriptive solutions proposed in the legal literature with respect to efficient penalty clauses. While refraining from generalizations regarding human behaviour, generalizations that might lead to positions quite removed from reality and in part ideological, as was the case with rational choice theory, the paper instead seeks to distinguish one situation from another in order to identify the existence of decision debiasing mechanisms capable of justifying – in the case of the set of rules in question – hypotheses in which lesser control over the penalty clause would be justified by both Common law and Civil law systems.

It may be of interest that this paper makes use of cognitive psychology to *expand* rather than to *restrict* contractual freedom.

Particular attention was paid to the decisions taken within a firm, in consideration of its hierarchical organization. In this case, the importance of the paper lies in the fact that, whereas psychologists have often underscored the overoptimism of entrepreneurs, these same authors have often demonstrated that there are mechanisms in hierarchical organizations that increase risk aversion. This paper notes that these mechanisms also have an ability to debias decisions.

More specifically, the paper emphasizes the importance of the “pressure of accountability” and “the outside view of the problem”. These two phenomena that characterize the hierarchical organization push it towards choices that are less corrupted by the biases of overoptimism, overconfidence, and illusion of control. It is worth noting that no blanket statement can be made for

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all firms, because in corporations managers answer to the board of directors, whereas this is not the case with the individual businessman.

Finally, it is worth noting that application of cognitive psychology without resorting to generalizations undoubtedly leads, aside from the case in question, to a more moderate paternalism than that supported by some scholars.

1. INTRODUCTION

The rules that apply to liquidated damages partially diverge between Common law and Civil law tradition. In the United States, a distinction arises between “proper” liquidated damages clause and penalty clause. A provision determining the amount of damages that must be rewarded in the event of breach is considered a “liquidated damages provision” and is enforceable if these two conditions hold: 1) actual damages at the time of contracting were difficult to estimate; 2) the amount fixed in the provision is a reasonable estimate of the actual loss. When these two conditions do not hold, the clause is considered a penalty clause and is held void. Richard Posner has described this distinction as “a major unexplained puzzle in the economic theory of law.”¹ Scholars who make use of rational choice theory find this doctrine inefficient and unjustified, although their position is cautious because of their respect for the Common law efficiency hypothesis.²

This Common law treatment of penalty clauses reveals that US courts do not fully share the idea that humans are perfectly rational decision makers. Indeed, US courts justify the invalidation of penalty clause by referring to the “illusion of hope,”³ i.e., the confidence that nothing will go wrong. Courts consequently assume that, due to their optimism, parties “fail to bargain adequately over remedial provision.”⁴ In cognitive psychology terminology, the “unrealistic optimism” referred to by courts can be referred to as “overoptimism” or “overconfidence”, or “illusion of control”⁵. The evaluation of reasonableness of liquidated damages is normally carried out from an ex ante point of view, but in some cases courts⁶ have preferred a so-called “second-look standard,”⁶ that is,

¹ Richard A. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. Chi. L. Rev. 281, 290 (1979). See also Charles Goetz & Robert E. Scott, *Liquidated Damages, Penalties and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 Colum. L. Rev. 554 (1977).

The most comprehensive survey on liquidated damages provisions theories is Gerrit De Geest, entry: *Penalty Clause and Liquidated Damages* in *ENCYCLOPEDIA OF LAW AND ECONOMICS* (Boudeeijn Bouckaert & Gerrit De Geest eds., 1998)

² See, e.g., *THE ECONOMICS OF CONTRACT LAW* 225 (Anthony Kronman and Richard Posner eds., 1979),

³ Jeffrey B. Coopersmith, *Comment, Refocusing Liquidated Damages Law for Real Estate Contracts: Returning to the Historical Roots to the Penalty Doctrine*, 39 Emory L. J. 267, 268 (1990).

⁴ Robert A. Hillman, *The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages*, 85 Cornell L. Rev. 717 (2000).

⁵ E.g. *Hutchinson v. Tompkins*, 259 So.2d 129, 132 (Fla.1972)

a comparison between the predetermined damages and actual damages. In the US, this tendency has been approved by a few influential scholars.⁷ In Civil law countries there has been no such strong opposition of penalty clause, but in general Civil law systems follow an intermediate approach, as exemplified by the Italian Civil Code of 1942 which states in article 1382 that “the penalty may be reduced if (...) its amount is manifestly too high.”⁸

2. HYPOTHESES CONSIDERED

In this work, we shall consider damages provisions that would be considered penalty clauses according to US Common law (i.e., because they are not a reasonable estimate of damages) and should be reduced, according to Civil Codes, as disproportionately high.

The aim of this work is to use cognitive psychology to identify cases in which penalty clauses should be considered enforceable also in the presence of the conditions just described. This should allow us to evaluate the scrutiny applied to liquidated damages provision in both Common law and Civil law jurisdictions.

Prominent scholars have previously addressed this issue through the lens of cognitive psychology,⁹ but it is my hope to shed some new light on this issue within the framework of analysis of this discipline.

As a benchmark case, we should proceed to consider whether (and why) two perfectly competent parties would introduce a liquidated damages provision that is not a reasonable estimate of expected damages. Influential scholars have reached different conclusions on this very question: Samuel Rea¹⁰ and Alan Schwartz suggested that a supra-compensatory damage provision is inefficient, while Anthony Kronman¹¹ and especially Richard Posner have espoused the opposite claim.

⁶ This expression is used by Melvin A. Eisenberg, *The Limits of Cognition and the Limits of Contracts*, 47, Stan. L. Rev. 211, 235 (1995)

⁷ See Melvin. A. Eisenberg, *The Limits of Cognition*, *supra* note 6 at 234-235.

⁸ There are however several differences among Civil law systems. For example, in Germany and only in Germany there is a distinction for merchants' discipline as opposed to one for non-merchants. In Germany the distinction is drawn between the Civil Code and the Commercial Code. Whereas the latter considers enforceable penalty clauses, BGB section 343 states that “if a penalty is disproportionately high the Court may, upon the request, reduce it to an appropriate amount”. See, in general on the situation in Continental Europe Ugo Mattei, *The Comparative Law and Economics of Penalty Clauses in Contracts*, 43 Am. J. Comp. L. 427 (1995).

⁹ See, for example, Russell B. Korobkin & Thomas S. Ulen, 105 *Law and Behavioral Science: Removing Rationality Assumption from Law and Economics*, Calif. L. Rev. 1091.

¹⁰ Samuel Rea, *Efficiency Implications of Penalties and Liquidated Damages*, 13 J. Legal Stud. 147 (1984).

¹¹ Anthony Kronman, *The Myth that Promises Prefer Supracompensatory Remedies: An Analysis of Contracting for Damage Measures*, 100 Yale L. J. 369 (1991).

According to Rea: “There are no strong economic arguments for enforcing damages that are unreasonably large ex ante, and the doctrine can be justified as a method of identifying cases of mistake or unconscionability.”¹² In the language of unconscionability doctrine, substantive unconscionability is evidence of procedural unconscionability.¹³ Kronman and Posner, on the other hand affirm that: “The penalty may bear no relation to the actual loss to A of delayed completion, for the purpose of the penalty is not to estimate damages, whether market or idiosyncratic, but to induce A to take a chance on contracting with a firm of uncertain reputation.” The idea that penalty doctrine can have a signalling function has been defended by Posner also in the many editions of his textbook.¹⁴

3. COGNITIVE PSYCHOLOGY, PENALTY CLAUSES, AND THE ROLE OF COURTS

Cognitive psychology refuses the idea of the rational human decision maker. Decision makers use heuristics and often commit systematic mistakes. Bias is the term used to indicate the observed behavioural gap between the rational human choice and the real-life individual observed in the experiments. The ideal competence that Posner attributes to the decision-maker is at odds with the findings of cognitive psychology. At first glance, cognitive psychology should offer arguments for those who approved penalty doctrine, if we simply consider that one of the most important biases that has been singled out - “overoptimism” - seems to be the scientific elaboration of the “illusion of hope” idea that has been used to justify penalty doctrine on the part of some courts.

However, some problems immediately arise. First of all, scholars who suppose that judges can establish whether the ex ante evaluation of damages was reasonable probably consider this task too easy. Here, as Hillman suggests¹⁵ cognitive psychology offers some arguments to those who are sceptical about the capabilities of judges to elaborate this judgment. Hindsight bias, another systematic deviation from rational behaviour, can be a problem for judges too. This bias consists of the fact that people overstate the “predictability of past events.”¹⁶ Once people know that an event has happened, they believe it was more likely to occur than before they receive the information.¹⁷

¹² Samuel Rea. *Efficiency Implications*, supra note 10 at 167. Rea’s idea is that a supra-compensatory provision is a form of gamble which is not desirable for parties which are risk-averse. The premium requested by one party exceeds the benefit obtained by the other party.

¹³ Richard Craswell, *Property Rules and Liability Rules in Unconscionability and Related Doctrines*, 60 U. Chi. L. Rev. 1, 17 (1993).

¹⁴ Richard A. Posner, *ECONOMIC ANALYSIS OF LAW*, 130, Sixth edition (2003)

¹⁵ Robert A. Hillman, *The Limits of Behavioral Decision*, supra note 4 .

¹⁶ Jeffrey J. Rachlinsky, *A Positive Psychological Theory of Judging in Hindsight*, 65 U. Chi. L. Rev. 571, 571 (1998).

¹⁷ Robert A. Hillman, *The Limits of Behavioral Decision*, supra note 4 at 723.

Judges can exhibit a hindsight bias too, and can overestimate the party's abilities to calculate, when they have stipulated the contract, the damage that could result from a breach.¹⁸ If, for example, there was a 1% possibility that substantial damage would occur in the case of breach and then that event really happens, the hindsight bias could lead the judge to think that there was a 20% chance.

In this way cognitive psychology can offer arguments to sustain the opinion of the difficulty of a judgment about the ex ante reasonableness of damages, supporting the idea that liquidated damages provisions should not be subjected to rigid scrutiny¹⁹.

Second, judges' fairness orientation may cause them to void a damages provision just because actual damages turn out to be inconsistent with the agreed damages. That is a tendency that has already emerged in some Anglo-American decisions.

And, finally, cognitive psychology can invite legislators to be cautious about judges' ability to evaluate damages clauses because of the presence of the "framing effect."²⁰ The "framing effect" is a bias consisting of systematic reversal of preferences when the same problem is presented in different ways.²¹ In the context of the damages provision, the framing effect can be very evident: indeed, parties can frame a penalty clause in such a way that judges do evaluate it as such. Parties can frame their agreed damages clause so that a judge is unlikely to call it a penalty. "For example, a seller of goods can offer a discount for early payment instead of a penalty for late payment, even though the two strategies achieve the same result. The ease with which parties can manipulate their agreed remedies provisions suggests that the dichotomy between penalties and liquidated damages lacks substance, and simply results from the framing bias of judges"²².

But as far as cognitive deficiencies that can influence judges are concerned, Jeffrey Rachlinski has observed that "courts might already have reduced the effect of hindsight bias (...) by identifying circumstances in which actual damages are considered per se unpredictable"²³.

Rachlinsky's idea is that judges' biases can be cured in the same way as biases of every person can be eliminated. It is merely a problem of building a system of rules that work in that direction.

¹⁸ On some biases that will be discussed here (but not hindsight bias) see also Larry T. Garvin, *Disproportionality and the Law of Consequential Damages: Default Theory and Cognitive Reality*, 59 Ohio St. L. J. 339, 389 ff. (1998).

¹⁹ Many arguments against penalty doctrine and in favour of freedom of contract, in the logic of neoclassical rational choice theory, are in Charles J. Goetz & Robert E. Scott, *Liquidated Damages*, supra note 1.

²⁰ See Robert A. Hillman, *The Limits of Behavioral Decision*, supra note 4 at 736.

²¹ Amos Tversky and Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 Journal of Business 251 (1986)

²² Robert A. Hillman, *The Limits of Behavioral Decision*, supra note 4 at 733.

²³ Jeffrey J. Rachlinski, *The "New" Law and Psychology: A Reply to Critics, Skeptics and Cautious Supporters*, 85 Cornell L. Rev. 739, 761 (2000).

4. THE FIELD OF BIASES: OVEROPTIMISM, OVERCONFIDENCE AND ILLUSION OF CONTROL

Until now we have extrapolated from cognitive psychology some arguments that suggest the inefficiency of penalty doctrine because of biases that can affect courts. But cognitive psychology, given its nature as a discipline that denies individual rationality, is usually a fertile ground for proponents of a more stringent control of contracts; in other words, for a wider legal paternalism. For the topic we are discussing in this work three biases shed light, as we have already in part anticipated: overoptimism²⁴, overconfidence, and illusion of control.

Overoptimism bias is the systematic tendency for people to be over optimistic about planned actions. More precisely, it is a tendency to overestimate the likelihood of good things happening regarding the outcome of planned actions and other events. In a study a random sample of New Jersey adults showed a high overoptimism about personal risks²⁵. In general optimism is greatest for hazards judged to be controllable by personal action²⁶. “A significant optimistic bias was found for

²⁴ Neil Weinstein, *Unrealistic Optimism About Future Life Events*, 39 J. Personality & Soc. Psychol. 806 (1980) (college students think themselves much more likely than average to like their job and own their home, and much less likely than average to excess in drinking or divorce); ID, *Unrealistic Optimism about Susceptibility to Health Problems*, 5 Journal of Behavioral Medicine, 441 (1982); ID, *Optimistic Biases about Personal Risks*, 246 SCIENCE 1232 (1989), In this work, Neil Weinstein gives some particularly important data on over-optimism with regards to personal safety. In general an individual will consider him/herself less at risk than others. However, Weinstein also highlights the fact that “optimism biases also appear for positive events: people regard themselves as more likely than others to experience financial success, career advancement, and long life”. Weinstein states that “in general, optimism is greatest for hazards with which subjects have little personal experience, for hazards rated low in probability, and for hazards judged to be controllable by personal action” (p.246). It is clear that the author considers experience to be a significant factor, a theme which is not given such emphasis in this paper, but he also attaches importance to forms of illusion of control, a typical characteristic of the counterparty who believes he has all aspects of a contract under control. From this point of view Weinstein’s work is instructive in terms of demonstrating the results which can be achieved in this paper. Other articles of note include, Lynn A. Baker & Robert E. Emery, *When Every Relation is Above Average: Perception and Expectation of Divorce at the Time of Marriage*, 17 L. & HUM. BEHAV. 439-450 (1993) in which it is there is the conclusion that a more accurate knowledge of the type of event and its consequences does not correct the bias; Dan Lovallo & Daniel Kahneman, *Delusion of Success*, .supra note 24 at 56; Arnold C. Cooper et al., *Entrepreneurs’ Perceived Chances for Success*, 3 J. Business Venturing 97 (1988); On the perception that negative events will happen only to others, see Neil D. Weinstein, *Why it Won’t Happen to Me:: Perceptions of Risks Factors and Susceptibility*, 3 Health Psychology 431-457 (1984). A famous work regarding drivers’ optimism is Ola Svenson, *Are We Less Risky and More Skillfull Than Our Fellow Drivers Are*, 47 ACTA PSYCHOLOGICA 47, 143-148 (1981), 146 (93% of drivers think they are better than average).

²⁵ Neil D. Weinstein *Optimistic biases*, suupra note at 1232..

²⁶ ID, at 1232.

25 of 32 hazards in this study”²⁷ People are unrealistically optimistic in relation to many aspects of their life²⁸. The majority of people “believe that their own risk of a negative outcome is far lower than the average person’s.”²⁹ Its relevance here is patent. If decision-makers are unrealistically optimistic, they will systematically underestimate risks, so that they will not understand the exact probability they face to pay damages stated by the penalty clause. If the parties to an agreement underestimate the risk of breach, then they assign it too low a value and are prone (if we imagine that it is rational to introduce a supra-compensatory provision) to provide for too-high damages. A link between overoptimism and overconfidence is represented by evidence that people usually underestimate low-probability risks of economic loss, and also low-probability high-magnitude risks unless they are highly salient.³⁰

Overconfidence is another bias that consists, first of all, of the human tendency to be more confident in one’s behaviours, attributes and physical characteristics than one ought to be. This definition however could create some confusion with the other self-serving bias, overoptimism. In cognitive psychology, overconfidence indicates the tendency of subjective accuracy to consistently exceed objective accuracy of prediction.³¹ Overconfidence bias may cause people to persist also in situations where their expected outcome is poor³². Moreover, overconfidence causes many individuals to grossly underestimate their odds of making a payment late. Statistically, many people are quite likely to make one or more payments late due o normal range of difficulties and delays in day-to-day-life³³. Overconfidence has an important consequence when it is only possible to know the probability distribution of an outcome. In this case overconfidence determines a tendency to assign too low a variance to the probability distribution; if it is too tight to start with, one is unlikely

²⁷ ID, at 1232.

²⁸ There is evidence that people underestimate their absolute as well as relative probability of auto accidents. See Colin F. Camerer and Howard Kunreuther, *Decision Processes for Low Probability Events: Policy Implications*, *Journal of Policy Analysis & Management*, 8, 565-592, 566.

²⁹ Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 *Stan. L. Rev.* 1471, 1541 (1998).

³⁰ Howard Latin, “Good” Warnings, *Bad Products and Cognitive Limitations*, 41 *UCLA L. Rev.* 1193, 1245-47 (1994); See, also, Colin F. Camerer & Howard Kunreuther, *Decision Processes for Low Probability Events: Policy Implications*, 8 *J. Policy Anal. & Mgmt.* 565 (1989).

³¹ Briony D. Pulford & Andrei Colman, *Overconfidence, Base Rates and Outcome Positivity/Negativity of Predicted Events*, 87 *British Journal of Psychology* 431, 431 (1996).

³² See Wikipedia: en.wikipedia.org/wiki/Overconfidence_effect.

³³ ID, at 2.

to evaluate optimally the penalty clause³⁴. It has been said that “the pervasive finding that subjects are (...) overconfident may have important economic implications. If people underestimate the width of distributions of future quantities, they will under-invest in flexibility and insurance, which might have implications for equilibrium models of rental and ownership of households, choices of mortgage terms (adjustable vs. fixed-rate), marriage and divorce rates, managerial investments in manufacturing flexibility and so on. Underestimation of variation might help explain why so many small businesses fail because of insufficient cash flow (stemming from overly narrow planning, perhaps ...).³⁵

Illusion of control is the tendency for human beings to believe they can control, or at least influence, outcomes that they demonstrably have no influence over. This is a particularly important bias for our analysis because parties who mistakenly believe that they can control events with regards to penalty clauses ultimately make the wrong decisions. There is literature about the illusion of control. Entrepreneurs, for example, view risk as a challenge to be overcome and a choice as a commitment to a goal. They imagine themselves as in control of people and events³⁶. Many attempts have been made to give explanations for this bias, some of which look at it as a positive adaptive characteristic of human beings. But in the analysis in this paper it will be possible to outline the possibilities of wrong decisions that can be brought about by this bias, but not its psychological motivation.

However the justification of one important explanation for illusion of control has its roots in the necessity of people to give themselves a self-regulation. In a chaotic and unregulated world, people are driven by internal necessities to reassert control³⁷.

Self-serving biases have been considered by many scholars as solid justification for the judicial scrutiny of penalty clauses³⁸.

³⁴ For an examination of the results of experiments see Overconfident in case-study judgment, in JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Daniel Kahneman et al. eds, 1982) at 287 ff.

³⁵ Colin Camerer, *Individual Decision Making*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 587, 595-95 (John H. Kagel & Alvin E. Roth eds., 1995)

³⁶ See J. March and Z. Shapira, *Managerial Perspective on Risk and Risk Taking*, Management Sci., 33, 1404-1418 (1987).

³⁷ See Eller J. Lange, *The Illusion of Control*, in JUDGMENT UNDER UNCERTAINTY, *supra* note 34 at 231 ff. As Langer explains (The Illusion of Control, *supra* note_ p.231 “ While most people will agree that there is much overlap between skill and luck, a full understanding of how inextricability bound the two areas are has to be attained. In principle the distinction seems clear. In skill situations there is a causal link between behaviour and outcome. Thus, success in skill tasks is controllable. Luck, on the other hand, is a fortuitous happening. The issue of present concern is whether or not this distinction is generally recognized. The position taken here is that it is generally not”.

5. COGNITIVE PSYCHOLOGY AND PENALTY DOCTRINES

Several conclusions can be made. If we consider individuals in terms of cognitive psychology there are three particular biases which are possible when at the point of accepting a contract which includes penalty clauses: overoptimism, which leads the subject to believe the situation is more favourable than it really is; overconfidence, which gives rise to excessive self-belief with regards to evaluating a situation, particularly concerning the view of the likelihood of success (the subject has a high degree of certainty which does not consider the full range of probable outcomes, including those most damaging); finally, the illusion of control, which leads the subject to feel that the situation is under control and is only influenced by his/her will rather than random events.

These three biases would seem to justify comprehensive checking of penalty clauses due to the possibility of making wrongful choices. By the same token a number of other checks of contractual freedom could be justified, or in the wider context, in any instance where a party voluntarily takes risks.

But cognitive psychology offers a deeper knowledge of cognitive limitation that can prevent a perfectly rational decision. But this discipline is context-specific³⁹ and rejects some kinds of generalization that are peculiar to neoclassical economic thought, such as the familiar theory that all

It is conceivable that the illusion of control increases with the desirability of the possible result from a contract, or perhaps with the necessity to draw up a contract, particularly where a potential agreement is seen as essential or highly attractive. This phenomenon is also recognized in the area of over-optimism: the more desirable the potential result, the higher the probability of success which is attributed to achieving it. Clearly all these elements influence the biases which can prejudice a decision relating to penalty clauses. See also: Briony D. Pulford & Andrei M. Colman, *Overconfidence*, *supra* note 27 at 437: “Another judgmental bias that has been reported is a tendency for probability estimates of future events to be unrealistically optimistic, and there is evidence that this bias varies according to whether the prediction related to positive or negative events (...)”. Langer’s view in her work on the subject is particularly significant: “In addition (...) there is another reason for this lack of discrimination between controllable and uncontrollable events. This is the fact that skill and chance factors are so closely associated in people’s experience”. This aspect is noteworthy because the risk inherent in court cases, even if low, may depend on a mix of controllable and uncontrollable events and as such may give rise to an illusion of control. As Langer states (p.238), “there is often a true difficulty in making the discrimination, since there is an element of chance in every skill situation and an element of skill in every chance situation. If the over-optimism increases with the desire to close the deal, it may be the case that skill elements appear to outweigh chance elements.

³⁹ See Jeffrey J. Rachlinski, *A New Social Assessment for Law and Human Behaviour: The Uncertain case for Paternalism*, 97 NW. U. L. Rev. 1165, 1166 (2003). He states (at 1207) that “Human choice is nuanced ; subtle differences in the present format, or “representation format” , or “representational structure”, lead people to make different decision”.

human beings except the under aged and other minor exceptions are competent individuals. Cognitive psychology refuses such generalizations.

For these reasons it would be desirable that, once some biases like overoptimism, overconfidence, and illusion of control have been underlined, some further distinctions could be traced. It seems doubtful that the same biases affect naive and sophisticated consumers, businessmen, chief executive officers and company agents.

Melvin Eisenberg has elaborated his own proposal for the regulation of penalty clauses. According to Eisenberg, overoptimism, along with other cognitive deficiencies, should justify a discipline of this sort: “If, in the breach scenario that has actually occurred, liquidated damages are significantly disproportional to real losses (that is, not only legal damages but material losses), the provision is unenforceable unless it is established that the parties had a specific and well thought-out intention that the provision applies in a scenario like the one that actually occurred.”⁴⁰

One supporter of the penalty doctrine is Jeffrey Raschliniski, on the basis of a broad generalization that contracting parties are over-optimistic.⁴¹

But as can be seen, these proposals tend to make use of broad generalizations. At first glance, it would seem possible to be able to trace an intuitive distinction between people with some experience in a certain activity (in the case examined in this paper, in contracts with penalty clause) and people without experience. The idea that some biases could be eliminated with experience is very intuitive, first of all because the decision makers usually bear the cost of their wrong decisions and for this reason should have an incentive to change their behaviour.

“Experience” should have a strong “debiasing effect”. In this context, it is worth noting that courts have never introduced a distinction between sophisticated parties, to which penalty doctrine should not be applied, and naive parties, protected by this doctrine. Courts have anticipated cognitive psychology results because, contrary to intuition, empirical studies tell us that experience does not eliminate some biases, particularly those considered here – overoptimism, overconfidence, and illusion of control⁴².

⁴⁰ Melvin A. Eisenberg, *The Limits of Cognition*, *supra* note 6 at 234-35.

⁴¹ Jeffrey J. Rachlinski, *The “New” Law and Psychology*, *supra* note 31 at 760-63. It is interesting to note that this Author in some papers has underlined the tendency of cognitive psychology to avoid generalizations and instead to be characterized by an attention to context. See, for example, Jeffrey J. Rachlinski, *Cognitive Errors, Individual Differences, and Paternalism*, 73 U. Chi. L. Rev 207 (2006). But there may well be a problem of interpretation, since his explanation is, in some respects, a summary rather than a detailed treatment.

⁴² Daniel Kahneman & Dan Lovallo, *Timid Choice, and Bold Forecasts: A Cognitive Perspective on Risk Taking*, 39 Mgmt Sci 27, 24-27 (1993); Hillel J. Einhorn & Robin M. Hogarth. *Confidence in Judgment: Persistence of the Illusion*

More precisely, although experience can work, at least to some degree, it is necessary that some stringent conditions be present. Hence, experiments have shown that feedback must be rapid and accurate.⁴³ Moreover, feedback should regard not only the mere result but should be “task feedback,” that is feedback that extends into what was inappropriate and what should have happened.⁴⁴ As concerns penalty clauses, experience could have an effect because the larger the financial loss, the faster the learning, and in many cases penalty clauses determine quite substantial financial losses. However this effect is probably eliminated by the fact that the phenomenon of “learning by experience” works if experience is very frequent *whereas* paying liquidated damages is relatively rare for most market participants.⁴⁵

This unpleasant result prevents the possibility of tracing a distinction between sophisticated parties and naive parties. Using unconscionability doctrine terminology, if the results of cognitive psychology had been different, it would have been possible to construe a lack of sophistication as procedural unconscionability, and unreasonableness of the liquidated damages as substantive unconscionability.⁴⁶ In this way, using scientific results based on the typical biases of overoptimism and overconfidence, penalty doctrine could have been inserted into the traditional doctrines such as unconscionability. Furthermore, a method of alleviating the strong scrutiny applied to liquidated damages provisions would have been identified. Unfortunately though, it is not possible to further develop the idea of distinguishing between sophisticated and unsophisticated parties.

6. NEW DISTINCTIONS – UNSATISFACTORY RESULTS

Whilst having acknowledged that the distinction between sophisticated parties and unsophisticated parties is not useful, it remains important to explore some of the other arguments outlined above. Among such arguments supporting penalty doctrine, we mentioned those suggesting that individuals are over-optimistic and overconfident and that they do not accurately evaluate the risks

of Validity, 85 *Psychological Review* 395 (1978); William Remus et. al., *Does Feedback Improve the Accuracy of Recurrent Judgemental Forecasts?* 66 *Organizational Behavior and Human Processes* 22 (1996).

⁴³ Hillel J. Einhorn & Robin M. Hogarth, *Confidence in Judgment*, supra note_, 407-15 (1978).

⁴⁴ Willam Remus et al., *Does Feedback Improve the Accuracy of Recurrent Judgmental Forecasts?* 66 *Organizational Behavior and Human Decision Processes* 22, 23 (1996).

⁴⁵ These ideas about errors and learning are well expressed in Larry Garvin, *Disproportionality and the Law of Consequential Damages*, supra note 18.

⁴⁶ The proposal to “abandon the special test for agreed damages and simply apply traditional policing doctrines, such as unconscionability and duress” is also in Robert A. Hillman, *The Limits of Behavioral Decision Theory*, supra note 4 at 738.

that they are taking due to a penalty clause. Accordingly a legal form of paternalism may be warranted.

Another group of arguments focuses on judges' decisions and leads to opposite conclusions. Courts suffer from biases as do all humans; in this case, hindsight bias, fair biases, and framing effects are present; for this reason they are not able to conduct those evaluations that penalty doctrine asks of them; mistakes are the rule while correct evaluations are the exception; the most efficient solution is to drop penalty doctrine and the strong paternalism that inspires it and apply general doctrines like unconscionability or duress to all liquidated damages provisions.⁴⁷

This paper aims to find a third solution: the generalization that is at the basis of penalty doctrine appears too wide, i.e. that the same overoptimism that leads a naive consumer to a wrong choice would lead a group of managers with different experiences, who make a collective decision, to the same mistake. This seems a counterintuitive generalization. It is possible that some debiasing mechanisms exist, and thanks to this some decisions are not a product of overconfidence, overoptimism or illusion of control. Evidence in this regard is represented by the empirical results of, for example, excellent calibration of some classes of people.⁴⁸

7. NEW BOUNDARIES: DEBIASING THROUGH HIERARCHIES

Cognitive psychology gives us a deeper knowledge of human decision-making processes. Supporters of this discipline point out that it differs from neoclassical rational decision theory in its ability to avoid false generalization. For this reason, the result that has been obtained with regard to penalty clause, i.e. justifying penalty doctrine on the assumption that people, generally speaking, are overconfident and over-optimistic, is unsatisfactory. Indeed, it is another generalization, with the difference that its content is opposed to what could be drawn from neoclassical rational choice theory.

As mentioned above, in Germany two different regimes are in force with respect to penalty clauses: one found in the Civil Code and the other in the Commercial Code. The Civil Code states that judges can reduce the penalty if it is disproportionately high. No such discretion is found in the rules in the Commercial Code: there are no limits to freedom of contract.

⁴⁷ Robert A. Hillman, *The Limits of Behavioral Decision Theory*, *supra* note 4 at 738 (2000).

⁴⁸ Burton P. Fabricand, HORSE SENSE, 1965. There are also results demonstrating superb calibration of weather forecasters' precipitation prediction. See Sarah Lichtenstein et al., *Calibration of Probabilities: The State of the Art to 1980*, 321, in *JUDGMENT UNDER UNCERTAINTY*, *supra* note 34.

It is interesting to highlight, as far as US Common law is concerned, a particular discipline that is somewhat understudied. This is the discipline known as “disproportionality doctrine.”⁴⁹ Consider the Restatement (Second) of Contracts § 351(3). This states that: “A court may limit the damages for foreseeable loss by excluding recovery for loss of profits, by allowing recovery only for loss incurred only as a result, or otherwise if it concludes that in the circumstances justice so requires in order to avoid disproportionate compensation”. In Comment *f* of this Section it is stated that “The limitations dealt with in this Section are more likely to be imposed in connection with contracts that do not arise in a commercial setting”.

We note a distinction between rules destined to be applied to commercial players and rules intended for non-commercial players (consumers). The question arises as to whether there are mechanisms of debiasing capable of supporting such a distinction. Individual choices about damages liquidated provisions can be the product of a debiased choice, so that Common law penalty doctrine seems just as unjustified as Civil law doctrines.

The focus will be on business organizations.

Is it then possible to identify some debiasing procedures within the hierarchy and, more generally, the mechanisms that allow an organization to work? That is not to say that the results about experience must be considered conclusive.

It is possible that new studies could demonstrate the ability of experience to weaken some biases like overoptimism and overconfidence. But it is quite possible that other factors can have the same if not stronger influence in leading individuals to make more rational decisions.

In a typical business organization, relations among staff have a hierarchical form. This means that usually a decision taken by a subordinate is evaluated by a senior colleague. There is one important phenomenon produced by a hierarchical relationship: pressure of accountability⁵⁰. Decision makers become more risk-averse when they expect their choice to be reviewed by others, and they prefer to avoid any kind of choice that implies even a small increase in the probability of a disaster.⁵¹ Risk aversion is a consequence of loss aversion, and it is not mitigated when decisions are made in an organizational context. As Kahneman and Lovallo point out, “On the contrary, the asymmetry between credit and blame may enhance the asymmetry between gains and losses in the decision maker’s utility.”⁵² As for managers, it has been noted in a survey that they appeared to have an

⁴⁹ See Larry T. Garvin, *Disproportionality*, *supra* note 18.

⁵⁰ A complete review of research literature on the effects of accountability on cognitive biases is in Jennifer S. Lener & Philip E. Tetlock, *Accounting for the Effects of Accountability*, 125 *Psychological Bulletin* 255, 259-63 (1999).

⁵¹ Kip Viskusi et al., *An Investigation on the Rationality of Consumer Valuation of Multiple Health Risks*, 18 *RAND Journal of Economics* 465 (1987).

⁵² Daniel Kahneman & Dan Lovallo, *Timid Choice and Bold Forecasts*, *supra* note 42 at 401.

excessive aversion to loss outcome that could in fact yield a net loss⁵³. But, aside from this particular managerial tendency which is contrasted by other behavioural aspects, it is important to highlight the existence of mechanisms of accountability for management choices. As for corporations, executives are subject to the control of boards of directors, which usually include non-executive directors.

“Pressure of accountability” can not only have an effect in terms of increasing risk aversion⁵⁴ but also in the form of a debiasing effect. When an individual is accountable for his decision, firstly, he cannot follow his “intuitive judgement”⁵⁵ and what Kahneman and Lovallo call, the “inside view of the problem.”⁵⁶ The intuitive judgment cannot be overviewed by other staff members and for that reason cannot be a way of justifying a decision in a hierarchical organization. When intuitive judgment is abandoned, an effort must be made to single out all the consequences of a decision, evaluating remote risks without removing them from the scenario. This phenomenon can be called “personal responsibility”.

Accountability also tends to force an “outside view of the problem”⁵⁷, because a justification of a choice on the basis of statistical data is a more objective way to defend the worker’s own decision, especially when the manager does not have inside information about the decision. When people follow an inside view of the problem “ they forecasts by focusing tightly on the case at hand – considering its objective, the resources they brought to it, and the obstacles to its completion; construing in their mind scenario of their coming progress; and extrapolating current trend into the future”⁵⁸.

⁵³ Swalm R. O., *Utility Theory-Insights into Risk Taking*, 44 Harvard Bus. Rev. 123.

⁵⁴ According to Daniel Kahneman and Dan Lovallo, *Timid Choice and Bold Forecasts*, *supra* note 42 at 401 “The evidence is that the pressures of accountability and personal responsibility increase the status quo bias and other manifestations of loss aversion. Notwithstanding these opinions the two authors conclude that decisions in a firm are generally over-optimistic. For example, they state that “pessimism about what an organization can do is readily interpreted as disloyalty, and consistent bearers of bad news tend to be shunned” (Kahneman & Lovallo, and Bold Forecasts, *supra* note 42 at 410. However, because subordinates must always answer to superiors it is possible that a stronger sense of realism is necessary.

⁵⁵ On the psychology of “intuitive judgment” and the remarkable amount of biases that distorts it see: HEURISTIC AND BIASES. THE PSYCHOLOGY OF INTUITIVE JUDGMENT (Thomas Gilovich et al. eds, 2002).

⁵⁶ About forecasts expressed on the base of the inside view of the problem in a concrete case Kahneman & Lovallo refer that “Not surprisingly, the resulting forecasts, even the most conservatives ones, were exceedingly optimistic” (Kahneman & Dan Lovallo, *Delusion of Success*, *supra* note 24 at , 60.

⁵⁷ See *supra* note 41.

⁵⁸ Kahneman & Dan Lovallo, *Delusion of Success*, *supra* note 24 at 60.

Instead “the outside view (...) involve[d] no attempt at forecasting the events that would influence the project’s future course. Instead, it examine[d] the experience of a class of similar cases, lai[d] out a distribution of outcomes for this reference class, and then position[ed] the current project in that distribution”⁵⁹. The outside view of the problem “focuses on the statistics of a class of cases chosen to be similar in relevant respect to the present one”⁶⁰.

It is recognized that the “inside view of the problem” generates over-optimistic opinions,⁶¹ so pressure of accountability not only counterbalances some biases because it is at the root of risk aversion, but it is also tends to lead to debiasing decisions. Accountability has also an effect on overconfidence: some studies give the results of a decreased overconfidence and an improved calibration. There is evidence of a bias attenuation⁶². This is also true for executives, when they are accountable to a board of directors; and the presence of non-executive directors – sometimes, independent members – who are not involved in all the steps of a decision, gives rise to the “outside view of the problem,” which is less biased and more accurate⁶³.

8. WHAT SHOULD BE DONE WHEN DEBIASING MECHANISMS ARE NOT PRESENT?

When a business organization takes the form of a corporation, it is also possible to identify some debiasing mechanisms with regard to managers’ decisions. It might be possible to adopt a separate discipline for penalty clauses signed by agents of a corporation because there should be a presumption in favour of rational choices and a decision based on an illusion of hope. In this case it should be stated that the main factor in debiasing decisions taken by company agents is not experience but primarily mechanisms that are characteristic of a hierarchical organization and, as

⁵⁹ ID at 60. But since liquidated damages provisions presents some peculiarity, it is convincing what Kahneman and Lovallo say, *Timid Choices and Bold Forecasts*: supra note 42 at 430: “A deliberate effort will therefore be required to foster the optimal use of outside and inside views in forecasting, and the maintenance of globally consistent risk attitudes in distributed decision system”.

⁶⁰ ID at, 25.

⁶¹ Daniel Kahneman & Dan Lovallo, *Timid Choice and Bold Forecasts*, supra note 42 at 408, and Daniel Kahneman & Dan Lovallo, *Delusion of Success*, supra note 24.

⁶² Philip E. Tetlock & Jae I. Kim, *Accountability and Judgment Processes in Personality Prediction Task*, 52 *Journal of Personality and Social Psychology* 700 (1987); Saul M. Kassin et al., *The Accuracy-Confidence Correlation in Eyewitness Testimony: Limits and Extensions of Retrospective Self-Awareness Effect*, 61 *Journal of Personality and Social Psychology* 698 (1991).

⁶³ There is a further reason which may drive managers to be risk averse – hindsight bias of the board of directors. In the event of a choice with a low probability of a negative outcome actually resulting in that very same negative outcome, hindsight bias drives the members of the board to believe that management had underestimated the probability of an undesired result. This then gives rise to a tendency towards more conservative choices.

far as debiasing mechanisms regarding managers' choices, peculiar to corporations. Not all these conclusions are valid for individual entrepreneurs who own a small firm. This is a hypothesis which presents some problems because the decision-maker, i.e. the entrepreneur, does not take decisions through processes similar to those that have been identified in a hierarchical organization. In this case decisions can be biased by overoptimism and overconfidence. The "inside view of the problem" and "the intuitive judgment"⁶⁴ are destined to prevail over "statistical evaluation" (the outside view of the problem) and a more complete identification of risks. The "illusion of hope" can be present even if the entrepreneur is a sophisticated businessman.

In this way a distinction made by ruling judges can be developed which does not precisely correspond to that between commercial and non-commercial players, but rather seeks to recognize differences within the category of commercial players. Some such cases would then be judged as if the relevant party were a consumer, since their experience has no legal validity.

As for consumers, it seems apparent that it is quite difficult to imagine situations in which debiasing mechanisms such as those singled out above can operate. On the basis of our analysis, consumers can be over-optimistic, overconfident and can have the illusion of control, and these biases are destined to distort their choices because consumers usually do not bear the pressure of accountability.⁶⁵ In the case of consumers, experience is also less of an influencing factor. Cognitive psychology however, may produce new results concerning this in the future.

9. SOME PRESCRIPTIVE SUGGESTIONS

As I have argued above, cognitive psychology is a tool with which it is possible to avoid substituting the broad neoclassical generalization – all individuals are competent – with another generic classification – all people are over-optimistic, overconfident and have an illusion of control. In the hypothesis we have considered, i.e. in a business organization, it has been possible to single out mechanisms that have the quality of debiasing choices, at least partially, and so it is conceivable that the law could equally determine whether decisions are made by rational decision makers.

⁶⁴ THE PSYCHOLOGY OF INTUITIVE JUDGMENT supra note 55. In this book the "intuitive judgment" is that one characterized by the presence of heuristics and biases that can emerge if debiasing processes do not operate. "The early studies of heuristics and biases displayed little interest in the conditions under which intuitive reasoning is pre-empted or overridden- controlled reasoning leading to correct answers was seen as a default case that needed no explaining- a lack of concern for boundary conditions is typical of young research programs, which naturally focus on demonstrating new and unexpected results, not on making them disappear". See Daniel Kahneman & Shane Frederick, *Representativeness Revisited: Attribute Substitution in Intuitive Judgment*, in HEURISTIC AND BIASES, supra in this note, 50.

⁶⁵ Hillel J. Einhorn & Robin M. Hogarth, *Confidence in Judgment: Persistence of the Illusion of Validity*, supra note __, 395.

In the previous analysis, I have shown that in moving from the organization of a corporation to that of a small firm owned by a single entrepreneur, debiasing mechanisms tend to diminish or even disappear. But the hope is that in the future cognitive psychology will be able to help legal scholars to identify more precisely all situations where a decision is taken through a debiasing process and conversely the cases where it is not.

The proposal, from a normative perspective, is twofold. The first one regards the Italian Civil Code. According to section 1382 “the penalty may be reduced if (...) its amount is manifestly too high.” Courts and scholars hold that in order to evaluate whether the penalty is “manifestly” too high, it is necessary and sufficient to consider the amount of the penalty. Following this line of reasoning, the penalty could be reduced also when the clause is inserted in a contract between two large corporations. The proposal is that it may be possible to evaluate whether a penalty is manifestly too high by scrutinising not only the amount of the stipulated damages but also the bargaining process. In other words, a penalty clause could be declared as “manifestly” high if there is some form of “bargaining naughtiness.”⁶⁶ The adverb “manifestly” should also involve some procedural control, in order to verify that decisions taken by the parties were subjected to some debiasing processes.

The second part of the proposal regards US penalty doctrine. The idea of some scholars of applying the unconscionability doctrine to all liquidated damages clauses has already been outlined. This clause presents some peculiarities, and the possibility of biased decisions is higher than in many other cases. The idea is to consider that the first requirement of the penalty doctrine which renders a clause “void” (“The amount fixed in the provision is not a reasonable estimate of the actual loss”) constitutes precisely the condition for “substantive unconscionability.” In this case substantive unconscionability is predetermined. The second requirement (“Actual damages are not difficult to estimate”) should be dropped because it “is irrelevant in determining whether a liquidated damages provision is a product of the limits of cognition”⁶⁷ But this form of unconscionability should not be sufficient. “Procedural unconscionability” should be necessary too. Additionally, in order to identify procedural unconscionability’s hypotheses, the tools of cognitive psychology which we have attempted to apply in the case of (hierarchical) business organizations seem necessary and valid, since they are supported by established scientific findings and are destined to give more useful tools through advances in this field of research.⁶⁸

⁶⁶ That is the expression used by Arthur Leff to indicate the “procedural unconscionability”. See Arthur A. Leff, *Unconscionability and the Code – The Emperor’s New Clause*, 115 U. Pa. L. Rev. 485, 487 (1967).

⁶⁷ Melvin A. Eisenberg, *The Limits of Cognition*, supra note 6 at 235.

Thomas Gilovich & Dale Griffin, *Introduction – Heuristic and Biases: Then and Now*, 1, 5-18, in Thomas Gilovich, Dale Griffin et al., *HEURISTICS AND BIASES*, 2002

10. THE DISCIPLINE IN ITALY AND THE UNITED STATES.

A comparable discipline of cases which recall that dictated by the doctrine of unconscionability can be found in Italian law. In fact there are a number of scenarios in which the legal system demands not one but both types of unconscionability.⁶⁹

The two cases which follow are typical examples from the area of contract voidability (cancellation):

Article 1447 c.c., which concerns voidability of contracts drafted under threat of danger, states that whosoever draws up a contract taking on oppressive obligations for the purposes, known by the counterparty, of saving himself or others in grave personal danger, may be liable to contract cancellation at the request of the obligated party.

As can be seen, this constitutes a case of bargaining naughtiness, i.e. the condition of grave personal danger together with a substantive 'naughtiness,' the oppressiveness of the obligation. One condition without the other would not be sufficient.

The second case, contract voidability due to damages (Art 1448 c.c.), relates to a party who has drafted a contract out of necessity and is then taken advantage of by the counterparty such that damages are incurred equal to half the value of the goods. This example also includes a case of procedural unconscionability alongside substantive unconscionability.

However, the discussion may be widened by considering the context of contracts in which one party is a consumer. Many of these contracts are governed by a discipline which is somewhat different from the traditional approach. Again, this can be described as a case of procedural unconscionability (the fact that one party is a consumer); the presence of a consumer as a party compromises the perfect functionality of the exchange as an expression of absolute and informed freedom.

Admittedly there are also scenarios in the Italian system according to which substantive unconscionability itself renders the contract or the relevant clause invalid. This is the case, for example in Article 1229, which stipulates that any agreement which excludes a party from fraud or other grave culpability, or limits such culpability, is legally null and void. In this case substantive unconscionability is a symptom of procedural unconscionability.

⁶⁹ Heisenberg prefers non to speak of unconscionability with reference to penalty clauses, probably because the doctrine of unconscionability covers the case of quasi-duress and quasi-fraud, while these cases concern mistakes. But it is worth stating that this doctrine also covers cases of unfair surprise. See Melvin A. Eisenberg, *The Limits of Cognition*, *supra* note 6 at 234 and Arthur A. Leff, *Unconscionability and the –The Emperor New Code*, 114 U. Pa. L. Rev. 485, 488 (1967).

As Craswell outlines, with regard to American Law, “some courts have suggested a vaguely mathematical metaphor in which a large amount of one type of unconscionability can make up for only a small amount of the other”,⁷⁰

The idea of a kind of mathematical formula, in which the greater part is substantive unconscionability and correspondingly the minor part is procedural unconscionability, may be applied to both the Italian and American legal systems. This is possible if we assume that forms of substantive unconscionability are symptoms of underlying cases of procedural unconscionability and conversely, that strong forms of procedural unconscionability are deservedly considered invalid in order to produce valid incentive for a party to obtain proper consent⁷² from its counterparty. It is also possible that strong forms of procedural unconscionability are themselves symptoms of an underlying substantive unconscionability.

The formula is thus expressed in the case of Tacoma Boat building Co. Inc versus Delta Fishing Company Inc., by Judge James Burns: “Of course, the substantive/procedural analysis is more a sliding scale than a true dichotomy. The harsher the clause, the less “bargaining naughtiness” is required to establish unconscionability”,⁷³

This is however not the case for penalty clauses. These are invalid in the American system and may be reduced in the traditional continental systems if there is substantive unconscionability, without the balancing formula proposed above. Consideration must be given to the tendency to evaluate the fairness of a penalty clause *ex post*, i.e. by referring to the effective damages suffered compared with that foreseen in the penalty clause. In such a case, even a correct evaluation of the expected damages *ex ante* would be repudiated and the judge would enforce his/her own decision rather than that liberally take by the party in question⁷⁴.

As far as US Common law, the solution could be to apply the doctrine of unconscionability with some peculiarity. As we have seen, substantive unconscionability should be determined *ex ante*,

⁷⁰ Richard Craswell, *Property Rules, Liability Rules in Unconscionability*, *supra* 13 at 18.

⁷¹ Tacoma Boatbuilding Co. Inc. v. Delta Fishing Company Inc. et al, 28U.C.C. Rep. _Serv. (Callaghan) 26, Judge James M. Burns (1980 U.S. District Court for the Western District of Washington, Seattle division, p. 21)

⁷² Utilizing Richard Craswell’s expression , *Property Rules, Liability Rules and Unconscionability*, *supra* note 13 at 6.

⁷³ Tacoma Boatbuilding Co., Inc., v. Delta Fishing Company, Inc., et al., 1980 U.S. Dist. LEXIS 17830, p.21; 28 U.C.C. Rep. Serv. (Callaghan) 26.

⁷⁴ Melvin A. Eisenberg favours an *ex post* evaluation of the reasonableness of penalty clauses, asserting that, “A second look standard for liquidated damages provisions is justified not because a second look may show that a provision was unconscionable, but because it may show that the provision was in all likelihood the product of defective cognition”. However, it is difficult to imagine that, in every case where the predicted *ex ante* damages differ from the actual loss, this is due to defective cognition. In predicting the damages *ex ante* the parties formulate an idea of plausible future damages and it is then possible that the true outcome is less fortunate, albeit improbable, for the party in question.

while procedural unconscionability should be affirmed in any case that a debiasing mechanism is not individuated.

This paper has sought to propose solutions for removing this doctrine which is so firmly rooted in American law. An attempt has been made to demonstrate that mechanisms exist for debiasing decisions which should exclude procedural unconscionability and consequently to render unjustified the voidness of the clause. An indication has been given of the background that has led some courts to use a type of mathematical formula in which strong substantive unconscionability requires, because of the invalidity of the clause, more moderate procedural unconscionability and conversely strong procedural unconscionability, again because of the clause being invalid, requires less robust substantive unconscionability.

The mathematical formula is a new and interesting solution for these kind of problems, because a strong procedural unconscionability could require, in many cases, still no substantive unconscionability and a strong substantive unconscionability is normally a symptom of a procedural unconscionability.

11. CONCLUSIONS AND AREAS FOR FUTUTRE RESEARCH.

This paper has made use of cognitive psychology for an objective directly opposed to the normal purpose of this branch of behavioural science. In fact cognitive psychology offers arguments for those scholars seeking to introduce moderate forms of paternalism; in some cases it serves as a tool and is therefore espoused by some authors who hold views ideologically opposed to the concept of full contractual freedom of the individual⁷⁵.

However, in studying penalty clauses, I have used cognitive psychology in an attempt to broaden contractual autonomy. Therefore, faced with a doctrine which consistently declares a certain clause invalid (or, in the case of continental legal systems, reduces the penalty), cognitive psychology may be used to identify hypotheses regarding the robustness of the clause. This paper has sought to draw on cognitive psychology tools to identify cases in which placing such limitations on contractual freedom does not appear justified. The result of this analysis contrasts strongly with both the attitude of American courts and the tendencies of Western Union legislative bodies: the distinction which has come to light is not between commercial parties and consumers, nor between professionals and consumers, but instead is generally between sophisticated and non-sophisticated parties, or repeated and non-repeated players. Such distinctions however do not appear particularly useful for pinpointing hypotheses in which penalty clauses can be considered valid independently

⁷⁵ Jeffrey J. Rachlinski, *The Uncertain Psychological Case for Paternalism*, *supra* note 31 at 1177.

from their content. To this end a distinction has been introduced between parties with a hierarchical organisation and those not organised in this fashion. Particular attention therefore, has been given to “pressure of accountability” and the “outside view of the problem,” two phenomena which in my opinion are able to provide a more thorough evaluation of the costs and benefits of contracts containing contractual clauses.

Pressure of accountability favours judgements not affected by overoptimism and overconfidence, and illusion of control since whoever puts them forward may be called to answer for his/her decisions or may be subject to remedial penalties. This means that all aspects of a decision must be carefully evaluated and the party must have a clear picture of the factors which could be called into question.

The outside view of the problem, although still a generic concept, suggests the idea of an assessment carried out by using information from previous cases to determine the likelihood of outcomes in the case in question. This enables overconfidence and overoptimism, along with individuals’ illusion of control, to be kept in check.

It remains to be established when these phenomena operate. In fact it is not easy to determine whether a party has made a decision from an assessment based on *the outside view of the problem* or by adapting to the *inside view of the problem* of his/her superior.

Perhaps it is necessary to carry out evaluations on a case-by-case basis, even though this gives rise to grave uncertainty (but equally, there is grave uncertainty in the continental systems which allow a judge to reduce penalties to a level considered equitable).

The same is true for *personal responsibility* because the subordinate could adapt his/her judgment to the inside view of the senior.

The intention of his paper has essentially been to move away from the system of approval used by large companies for contract clauses, in which individuals prepare an agreement, managers assess the document, others approve it and finally the members of the organisation who will work with the contract take it on board. This chain of command seems to me to be sufficient to generate debiasing mechanisms which are able to put single clauses beyond question.

As has been seen, the same cannot be said for smaller individual entrepreneurs who make business decisions on their own behalf. In this case the above debiasing mechanisms are not in operation and clauses must be evaluated on their own merits.

It is evident that in this paper the distinctions between commercial player and non commercial player and between sophisticated parties and non sophisticated parties have been abandoned. Rather, the key aspect concerns the process of the formation of a willingness to enter into a contract, analyzing the presence or otherwise of debiasing mechanisms.

As stated previously, the analysis is not considered exhaustive: other debiasing mechanisms may exist, for example for consumers, which have not been at all studied. Neither have the debiasing effects been considered of certain external agents on companies, such as lawyers and consultants.

Instead, the starting point has been the observation from experimental economics which states that only certain conditions which normally exist solely in the laboratory are able to correct the effects of individuals' overoptimism and overconfidence. The experience of the parties is not such a powerful debiasing tool.

This result conflicts with the commonly held view that the parties with the most experience require the least protection; conversely the view that parties with less experience require greater protection can be countered by considering that if debiasing mechanisms are in operation the unquestionable nature of decisions can be supported.

As far as further areas of future research the work is incomplete. It remains to understand, for example, how many levels of hierarchy are necessary in order to debias a decision, and, to give another example, when it's possible to affirm that an outside view of the problem is properly followed.

But there are many other interesting areas to investigate. It's possible to find mechanisms of debiasing in other situations: for instance when one party is a consumer. Also a low probability risk high magnitude risk could not create so many problems if it's highly salient and the party has to face it frequently. Law and cognitive psychology gives us the possibility to reinterpret contract law in a way to obtain also some successes and not only failures⁷⁶.

⁷⁶ Eric A. Posner, *Economic Analysis of Contract Law after Three Decades: Success of Failure?*, 112 Yale L. J. 829, 831.