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Chapter 7
Loss Aversion, Omission Bias and the Civil Standard of Proof

Mark Schweizer

Abstract This article shows how insights from cognitive psychology, namely loss aversion, omission bias and status quo bias, explain the intuitive appeal of a standard of proof in civil cases that is considerably higher than the "preponderance of the evidence" or "balance of probabilities" standard employed by Common Law. These insights may explain the almost visceral rejection any suggestions lowering the standard of proof in civil matters have received in Germany. They do not, however, provide a normative basis for a standard of proof higher than 50% posterior subjective probability in civil cases.

7.1 Introduction

While Common Law knows at least two different standards of proof, the "preponderance of the evidence" (or "balance of probabilities" in English law) for civil cases and the "proof beyond reasonable doubt" in criminal cases,[1] continental European Civil Law generally does not distinguish between standards of proof in civil and criminal matters.[2] This is one of the most fundamental differences between Common Law and Continental European Civil Law.[3]

Under the "preponderance of the evidence" standard of US law and the "balance of probabilities" standard of English law, the plaintiff has discharged his burden of persuasion if the fact finder is convinced that the allegations in support of the claim are more likely true than not.[4] If the fact finder is inclined to believe the plaintiff

[1] See *Addington vs. Texas,* 441 U.S. 418 (1979), 422, 423; for English law *In Re H & Others* (minors) UKHL 16, AC 563 (1995), sect. 76; Wright 2009, 80.

[2] Engel 2009, 435; Motsch 2009, 242.

[3] Paulus 1997, 750; Kokott 1998, 18; Clermont and Sherwin 2002, 262 et seq.; Engel 2009, 435; Motsch 2009, 242; but see Gottwald 2000, 175; Brinkmann 2005, 3.

[4] For US law O'Malley et al. 2001, § 166.51; for English law *Miller vs. Minister of Pensions,* 3 All ER 372 (1947), 373 et seq.

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more than the defendant, even to the slightest degree, then he or she must find for the plaintiff.[5]

The standard of proof under Continental Civil Law, on the other hand, always requires the (full) conviction of the judge, be it a "conviction intime" or a "conviction raisonnée", a reasoned or reasonable conviction meaning that the judge must justify his or her decision by valid arguments.[6] This standard is described in the leading case of the German Federal Supreme Court (Bundesgerichtshof) as a

> personal conviction […] in doubtful cases, the judge may and must be content with a degree of certainty useful for practical life that silences doubt without completely excluding it.[7]

Neither German nor Swiss courts have ever expressed the decision threshold as a quantified subjective probability. The traditional doctrine is also reluctant to do so, but when it does quantify the standard of proof, the decision threshold is said to be above 90 %;[8] sometimes even figures of 95 %[9] or 99.8 %[10] are given.

There are certainly many exceptions to the standard of full conviction in civil cases, namely for allegations that are notoriously difficult to prove, such as causality in medical malpractice or the theft of an insured item to be proven by the policy holder.[11] But the exceptions—and the considerable doctrinal effort required for their justification—prove the rule.[12] It can hardly be doubted that the standard of proof demanded by doctrine and case law for civil matters in Germany and Switzerland is much higher than the "balance of probabilities" required by Common Law.[13] This became most evident with the harsh rejection any suggestions for a lower standard of proof have been met with in Germany in the 1970s and 1980s.[14]

This has "puzzled" Common Law scholars,[15] as normative decision theory provides an elegant explanation for the preponderance of the evidence standard (as will

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[5] For English law Redmayne 1999, 172; for US law *Livanovitch v. Livanovitch,* 131 A. 799, 800 (Vt. 1926) ("If […] you are more inclined to believe from the evidence that he did so deliver the bonds to the defendant, even though your belief is only the slightest degree greater than that he did not, your verdict should be for the plaintiff" (quoting the jury instructions).

[6] The standard of proof in Germany is better described as a "conviction raisonnée" rather than the French "conviction intime"; see Deppenkemper 2004, 208 et seq., 421 and the references cited therein.

[7] BGHZ 53, 245 = BGH NJW 1970, 946 (translation from German by the author); for Swiss law BGE 130 III 321 sect. 3.2.

[8] For German law Kadner Graziano 2011, 189; for Swiss law Berger-Steiner 2008, sect. 6.81; Walter 2009, 53; Bühler 2010, sect. 9.

[9] For German law Greger 1978, 110; for Swiss law Summermatter and Jacober 2012, 142.

[10] For German law Bender 1981, 258; Fuchs 2005, 80.

[11] See, e.g., for German law BGH NJW 1995, 2169; NJW 2004, 777; for Swiss law BGE 130 III 321 sect. 3.3; 132 III 715 sect. 3.2.

[12] Walter 1979, 184.

[13] But see Gottwald 2000, 175; Brinkmann 2005, 3, who argue against any difference in principle between the German and the Common Law's standard of proof in civil cases.

[14] Prütting 2010, 142.

[15] Clermont and Sherwin 2002, 244.

be explained in detail below).[16] In this article, I seek to demonstrate how insights from cognitive psychology can explain the intuitive appeal of a standard of proof considerably higher than 50% posterior subjective probability in Civil matters. I shall argue, however, that the psychological insights cannot provide a normative basis for the Civil Law's higher standard of proof in civil cases.

The article is structured as follows: First, the standard of proof is defined and distinguished from the related concept of burden of proof. Secondly, the theoretic justification for the balance of probabilities standard is explained in some detail. Despite the elegant justification provided by normative decision theory, the lower standard has been viscerally rejected by German doctrine, as will be explained next. Then, the insights from cognitive psychology that explain the intuitive appeal of a higher standard of proof, namely loss aversion, omission bias and status quo bias, and their empirical support, are summarized. In a final section, it is examined whether these insights can provide a normative basis for a higher standard of proof, and it will finally be argued that they cannot.

7.2 Standard of Proof Defined

In the following, the standard of proof will be understood as the decision threshold of the fact finder that allows him to find in favour of the party bearing the burden of persuasion (generally the plaintiff in civil cases—although it is well understood that burden of persuasion does not depend on the role of the party—and the state in criminal cases). It is assumed that this decision threshold can be expressed as a subjective probability, or as a degree of conviction, that the factual statements supporting the claim (or accusation) are true.

In a fully Bayesian account of the judicial fact finding and decision-making process, the fact finder starts with some prior probability for the truth of the relevant factual statements, then updates this probability in light of the evidence presented to her during the trial using Bayes rule, and ultimately arrives at a posterior subjective probability for the truth of those statements.[17] She then compares this posterior subjective probability to a pre-determined decision threshold—the standard of proof—and decides for the party bearing the burden of proof if her degree of belief exceeds the decision threshold, and against that party if her degree of conviction does not exceed the threshold (some tie-breaking rule is needed if the posterior subjective probability is exactly equal to the decision threshold; the majority view being that in this case, the decision goes against the party bearing the burden of proof[18]).

[16] The seminal papers are Kaplan 1968 and Cullison 1969.

[17] The use of the plural for "statements" is deliberate. In my view, the Bayesian posterior probability must be for the joint probability of all relevant factual statements being true. This avoids the much debated "conjunction paradox" at the potential cost of defining standard of proof differently than current law.

[18] Kegel 1967, 337; Maassen 1975, 10; Redmayne 1999, 172; Posner 2007, 647, but see Motsch 1983, 83.

Whether the Bayesian analysis of evidence evaluation is insightful or misleading has been debated for over 40 years.[19] For the behavioural analysis presented in this contribution however, it is not necessary that one fully embrace the Bayesian approach. It is sufficient if one accepts that conviction comes in degrees, rather than in the dichotomous categories of "I'm convinced" and "I'm not convinced". It is difficult to make an argument for this other than pointing out that people behave as if their convictions had degrees (usually, betting is pointed out as a prime example, but some lawyers take exception to the comparison of judicial decision-making and betting, so it is probably best avoided). One further has to accept that different standards of proof can be expressed as different degrees of belief or conviction. One does not, however, have to accept that the different standards can be expressed as exact numbers on a scale from 0 to 1 (or more often, in the legal literature, on a scale from 0 to 100 %). The latter claim is highly controversial, at least for the criminal standard of "proof beyond any reasonable doubt".[20]

Finally, it is best to avoid the term "burden of proof" for the standard of proof. "Burden of proof" should be reserved for the procedural obligation to persuade the fact finder ("burden of persuasion" or "objektive Beweislast" in German terminology) and to adduce evidence ("burden of production" or "subjektive Beweislast"[21] in German terminology). The burden of persuasion determines which party suffers (by losing his or her case) when the conviction of the fact finder does not reach the pre-determined decision threshold.[22] It is fixed—according to German doctrine by substantive law—and stays constant during litigation. The burden of production, or burden of producing evidence, on the other hand can shift during litigation.[23] It initially lies with the party bearing the burden of persuasion, but once that party has adduced sufficient evidence to create a degree of belief in the mind of the fact finder that exceeds the decision threshold, it shifts to the other party, who is now obliged to adduce evidence to the contrary at the pain of losing the case.

7.3 Standards of Proof in a Decision Theoretic Framework

The decision theoretic model is the oldest and still, certainly in the legal literature, the most widely used analytic framework for the analysis of standards of proof. Its appeal lies in that it is both simpler than more recent game-theoretic and mechanism design approaches and that it maps relatively well to positive Common law.

[19] See Park et al. 2010, for an overview. The debate started with Finkelstein and Fairley 1970 and the answer came from Tribe 1971. The collection of essays by Tillers 1988 provides an overview of the debate up to that time, and Tillers 2011 a summary of the debate since.

[20] See the references cited in Tillers and Gottfried 2007.

[21] Rosenberg 1965, 16.

[22] Baumgärtel 1996, n. 9.

[23] Musielak 1975, 49.

Table 7.1 Potential errors in hypothesis testing

	True state is H_0	True state is H_1
Decision for H_0	Correct	Type II error
Decision for H_1	Type I error	Correct

> Bayesian decision theory seems to provide a pleasing and harmonious interpretation of civil litigation's usual requirement of proof by a preponderance of the evidence.[24]

Under the decision theoretic framework, which was first used independently by Kaplan and Cullison, the focus is exclusively on the decision problem facing the fact finder, who has to make his decision about the true state of the world under uncertainty. The fact finder is treated like a welfare-minded social planner, trying to make the decision that maximizes social utility (or minimizes social cost; like most legal scholars, I use the cost minimization paradigm in the following).

When deciding whether a hypothesis—such as the factual statements made by the plaintiff—is true, the decision-maker can fall victim to two errors: accepting the hypothesis as true although it is actually false, and rejecting the hypothesis as false although it is actually true. These two mistakes are often referred to as type I, or α-error, and type II, or β-error.[25] "Error" here means simply that the accepted factual statements and reality do not correspond; "error" does not mean the decision maker is at fault in any way. (Table 7.1)

If the social costs of the different types of errors are not equal, one does not want to minimize the number of mistakes made, but rather limit the expected costs of the decision. Let $\{w_1, \ldots, w_c\}$ be a finite set C of possible states and $\{a_1, \ldots, a_a\}$ a finite set A of possible actions. $L(a_i|w_j)$ shall be the cost, expressed as a real number, of the choice of action a_i if the state of the world is w_j.

The evidence is expressed as x. Assume the decision-maker choses action a_i. If the actual state of the world is w_j, the costs of the decision are $L(a_i|w_j)$. The conditional risk R of the choice of action a_i given the evidence x is therefore

$$R\left(a_i|x\right) = \sum_{j=i}^{c} L\left(a_i|w_j\right) \Pr(w_j|x)$$

The decision rule, also known as "Bayes decision rule", posits that the action with the smallest conditional risk should be chosen. (Table 7.2)[26]

When facing a choice between exactly two actions, a_1 and a_2, the decision maker should, conditional on the evidence x, chose according to the following rule:

$$\text{decide} \begin{cases} a_1 & \text{if } R\left(a_1|x\right) < R(a_2 \mid x) \\ a_2 & \text{else.} \end{cases}$$

[24] Kaye 1987, 55.

[25] Biemann 2009, 207.

[26] Bourmistrov-Jüttner 1987, 247.

Table 7.2 Decision matrix

	$Pr(w_1\|x)$	$Pr(w_2\|x)$	Expected costs
a_1	L_{11}	L_{12}	$Pr(w_1\|x)\, L_{11} + Pr(w_2\|x)\, L_{12}$
a_2	L_{21}	L_{22}	$Pr(w_1\|x)\, L_{21} + Pr(w_2\|x)\, L_{22}$

To simplify the notation in Table 7.2 and in the following, $(a_i|w_j)$ is written as L_{ij}. Table 7.2 shows that

$$R(a_1|x) = Pr(w_1|x)L_{11} + Pr(w_2|x)L_{12}$$

$$R(a_2|x) = Pr(w_1|x)L_{21} + Pr(w_2|x)L_{22}$$

Therefore the decision maker should chose action a_1 if

$$Pr(w_1|x)L_{21} + Pr(w_2|x)L_{22} > Pr(w_1|x)L_{11} + Pr(w_2|x)L_{12}$$

This can be re-written as

$$\frac{Pr(w_1|x)}{Pr(w_2|x)} > \frac{(L_{12} - L_{22})}{(L_{21} - L_{11})}$$

Since $Pr(w_2|x) = 1 - Pr(w_1|x)$ the following holds[27]

$$Pr(w_1|x) > \frac{(L_{12} - L_{22})}{(L_{21} - L_{11}) + (L_{12} - L_{22})} = \frac{1}{1 + \left(\frac{L_{21} - L_{11}}{L_{12} - L_{22}}\right)}.$$

The decision maker should, in other words, decide for a_1 when his subjective posterior probability of w_1 exceeds the right hand side of the above inequality. Since it is traditionally assumed in the legal literature that correct decisions have no costs associated with them—it would be better to say that their cost is, for normative reasons, not to be considered—the above inequality can be simplified to the following, which is the form as it was originally used by Kaplan in his seminal 1968 paper:[28]

$$Pr(w_1|x) > \frac{L_{12}}{L_{21} + L_{12}} = \frac{1}{1 + \left(\frac{L_{21}}{L_{12}}\right)}.$$

[27] Cullison 1969, 564 et seqq.; DeKay 1996, 111.

[28] Kaplan 1968, 1072.

The decision theoretic framework seems to provide an elegant explanation of the Common Law's two different standards for criminal and civil matters.[29] Common Law employs the (high) standard of "proof beyond any reasonable doubt" in criminal cases, and the (lower) standard of "preponderance of the evidence" ("balance of probabilities" in English law) in civil cases.[30] To reach a guilty verdict in a criminal case, the jury must be convinced beyond any reasonable doubt that the facts alleged by the prosecution are true. A "reasonable" doubt is one that is based upon reason and not purely on speculation, a merely possible doubt does not prevent a finding against the defendant.[31]

In a civil case, on the other hand, it is sufficient if the evidence adduced by the party bearing the burden of proof "when considered and compared with that opposed to it, has more convincing force, and produces in your [sc. the jurors'] minds belief that what is sought to be proved is more likely true than not true."[32] If the fact finder is inclined to believe the plaintiff more than the defendant, even to the slightest degree, then he or she must find for the plaintiff.[33] In other words, it is sufficient if the plaintiff's allegations are more probably true than not.[34]

According to normative decision theory this makes perfect sense, assuming different costs of errors in criminal and civil matters: since wrongly convicting an innocent person is widely considered to be a graver mistake than erroneously acquitting a guilty person, the expected error costs are minimized if the standard of proof in criminal cases is well above 50 % (whether it can be quantified at all is highly controversial,[35] but nobody would dispute that a civil jury may find for the plaintiff under circumstances that would not permit a criminal jury to convict the

[29] In US law, a further intermediate standard of proof known as "clear and convincing evidence", which is applicable in certain civil cases (e.g., civil fraud), is well-established, see, e.g., *Addington vs. Texas,* 441 U.S. 418 (1979), 422, 423, while it is a matter of controversy whether English law recognizes such an intermediate standard of proof, Anderson et al. 2006, 243; McBride 2009, 325 et seq.

[30] See *Addington vs. Texas,* 441 U.S. 418 (1979), 422, 423; for English law *In Re H & Others* (minors) UKHL 16, AC 563 (1995), sect. 76; Wright 2009, 80.

[31] Jury instructions according to the Ninth Circuit Model Criminal Jury Instructions, 2003 edition, § 3.5 – Reasonable Doubt—Defined. Sheppard 2003 shows the development from "moral certainty" to "reasonable doubt" to "articulate doubt", which, according to him, explains the current practice in criminal law better.

[32] O'Malley et al. 2001, § 166.51.

[33] *Livanovitch v. Livanovitch,* 131 A. 799, 800 (Vt. 1926) ("If […] you are more inclined to believe from the evidence that he did so deliver the bonds to the defendant, even though your belief is only the slightest degree greater than that he did not, your verdict should be for the plaintiff" (quoting the jury instructions); Pennsylvania Suggested Standard Civil Jury Instructions, 3rd ed. 2005, § 1.42; for English law Redmayne 1999, 172.

[34] Illinois Supreme Court Committee on Pattern Jury Instructions in Civil Cases (eds.), Illinois Pattern Jury Instructions: Civil, § 21.01 ("more probably true than not true"), available from www.state.il.us/court/CircuitCourt/CivilJuryInstructions/21.00.pdf (last visited 1 August 2012); Sand et al. 2007, Vol. 4, § 73.01, Instruction 73–2 ("by a preponderance of the evidence" means "more likely true than not true").

[35] See the references cited in Tillers and Gottfried 2007.

accused). On the other hand, it is a commonly held assumption that, in civil cases, the disutility of erroneously finding for or against the plaintiff is similar,[36] which means the error-cost minimizing decision threshold is ≥ 50 %. As one commentator put it, "civil cases are the paradigm for symmetrical error costs."[37]

7.4 A Visceral Reaction to the Proposal of a "Balance of Probabilities" Standard in German Doctrine

Given Common Law's longstanding tradition of using a lower standard of proof for civil matters and the convincing explanation of the different standards by normative decision theory, Common Law scholars have been "puzzled" by the Continental European Civil Law's lack of clear distinction between standards of proof for civil and criminal matters.[38] Few would dispute that the degree of conviction required for finding for the plaintiff in Civil Law is much higher than that required by the Common Law's "preponderance of the evidence" or "balance of probabilities" standard.[39]

This becomes particularly obvious when one considers the reception the idea of a general standard of proof of a "balance of probabilities" received in Germany in the 1970s. Starting with the doctoral thesis of *Maassen*[40] in 1975, a number of authors have suggested a lower decision threshold in German civil procedure.[41] The idea met with visceral rejection and the authors were accused of all sorts of doctrinal errors. The ferocity of some of the responses is surprising given the usually quaint discourse in German civil procedural law. *Gerhard Walter*, who would later become professor for civil procedural law at the University of Berne, wrote in his post-doctoral thesis with regards to the new-fangled idea of a lower standard of proof for in civil matters:[42]

[36] *In re Winship* 397 U.S. 358, 371 (1970) (Harlan J. Concurring); Ball 1960, 817; Kaye 1987, 72; Lee 1997, 25; Posner 1999, 1504; Redmayne 1999, 171; Clermont and Sherwin 2002, 268; Stein 2005, 148; Zamir and Ritov 2012, 189; but see Tyree 1982, 93 et seq.

[37] Lee 1997, 25.

[38] In a strongly worded article, *Kevin M. Clermont and Emily Sherwin* "rudely wonder how civilians can be so wrong", Clermont and Sherwin 2002, 244. For an equally strongly worded rebuttal see Taruffo 2003.

[39] But see Gottwald 2000, 175; Brinkmann 2005, 3, who argue against any difference in principle between the German and the Common Law's standard of proof in civil cases.

[40] Maassen 1975.

[41] Motsch 1978, 335 et seq.; Nell 1983, 211. A precursor, not yet relying on a decision theoretic framework, was Kegel 1967, 335.

[42] Walter 1979, 182. In the German original: "Eine Demontage des "Überzeugungserfordernisses" würde also weithin zu einer Korrumpierung der Rechtsmoral in der Bevölkerung führen – wenn schon eine überwiegende Wahrscheinlichkeit genügt, um "einen Prozess zu gewinnen"! Man muss […] will man die Übereinstimmung eines Volkes mit seiner Justiz, den "Konsens" nicht verlieren, auf gewachsene und verankerte Traditionen Rücksicht nehmen."

> The removal of the requirement of inner conviction would lead to a corruption of the population's morale—if a preponderance of probabilities was enough to "win in court"! If one does not want to lose the accord, the consensus, of the people with their justice system, one has to respect grown and rooted traditions.

Others claimed that the "acceptance of jurisprudence" would depend on a high standard of proof.[43] For *Habscheid*, another influential civil proceduralist, the introduction of a standard of proof of a "balance of probabilities" touches the very root of the rule of law.[44]

The defenders of the traditional view resoundingly won the debate of the 1970s/1980s. Since the 1990s, hardly any German[45] author has questioned the high standard of proof in civil matters (notwithstanding the many exceptions to the rule developed primarily by the courts).[46] In 2010, *Prütting* stated that "such extreme notions [sc. of a general standard of proof of a balance of probabilities] have not caught on at any time in German jurisprudence and are not mentioned any more in any commentary on the Civil Procedure Act."[47]

The interesting question is why a standard of proof that has been traditionally applied by Common Law, and which can be intuitively explained by normative decision theory, has met with such resistance in Germany. *Clermont* and *Sherwin* conclude that the Civil Law countries weigh the perceived legitimacy of the justice system higher than the avoidance of error.[48] But that only begs the question as to why errors in favour of the plaintiff are apparently so much more detrimental to the perceived legitimacy of the justice system than errors in favour of the defendant. Why is it that lawyers in Civil Law countries seem to readily accept that many injured parties that are, under the applicable substantive law, entitled to compensation, do not receive compensation (which is the effect of a high standard of proof), while it appears to be unacceptable to the very same lawyers that a party that is not obliged to pay damages according to substantive law is ordered to pay damages? A behavioural analysis can shed some light on this question.

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[43] Berger-Steiner 2008, Rz. 5.131. See also Hohl 1991, 155: "Le degré de vraisemblance à exiger du juge doit être suffisament élevé pour être acceptable sur les plans moral et éthique et légitimer la coercition judiciaire."

[44] Habscheid 1990, 118. In the German original: "Es ist für mich auch fraglich, ob der Gesetzgeber eine solche Regelung einführen kann, ohne an die Wurzeln des Rechtsstaats zu rühren."

[45] In Switzerland, the traditional view has never been under attack in the first place. This is about to change with the publication of my Habilitationsschrift "Beweismaß und Beweiswürdigung. Rationalität und Intuition" Tübingen 2015 (forthcoming).

[46] But see Wagner 2009, 172 et seq.

[47] Prütting 2010, 142. In the German original: "Es ist nicht zuletzt den klaren und beharrlichen Darlegungen Karl Heinz Schwabs zu danken, dass solche extremen Auffassungen zu keinem Zeitpunkt in der deutschen Rechtswissenschaft Fuß fassen konnten und in keinem Kommentar zur ZPO mehr Erwähnung finden."

[48] Clermont and Sherwin 2002, 269 ff.

7.5 The Behavioural Toolbox and its Application to the Civil Standard of Proof

7.5.1 Loss Aversion

Reference point-dependent valuations are a well-established finding from behavioural economics.[49] The reference point—whether something is considered a gain or a loss from a given reference point—influences people's acceptance of risk.[50] *Kahneman* and *Tversky*, who are at the root of the development of the theory of reference-dependent valuation, observed something else as well: losses loom larger than gains. "The aggravation that one experiences in losing a sum of money appears to be greater than the pleasure associated with gaining the same amount."[51] Most people find symmetric bets of the form (x,.50; -x,.50) unattractive. The averseness of symmetric bets generally increases with the size of the stake.[52] The ratio of G[ain]/L[oss] which makes an even chance to gain G or to lose L just acceptable lies between about 2 and 2.5 for both risky and riskless choice involving monetary outcomes and consumption goods.[53] This means that people experience about twice the disutility for a loss than they experience utility for a corresponding gain.[54]

Civil litigation provides a natural "frame" for outcomes.[55] Generally, the plaintiff frames the outcome of the litigation as a gain compared to the *status quo ante* trial. Conversely, the defendant sees the outcome as a loss.[56] While occasionally the parties' roles may be interchangeable, depending on who initiates the proceedings,[57] it is safe to say that in an overwhelming majority of cases, it is the plaintiff who asks the court to impose a change of the *status quo*, e.g., making the defendant pay, turning over possession of a good or stop behaving in a certain way. In all of these cases, the losing defendant will conceive compliance with the judgment as a loss.

If one uses the empirically observed median ratio G/L of about 2.25 and uses normative decision theory to compute the decision threshold which minimizes the expected error costs of the decision for or against the plaintiff, one arrives at a subjective posterior probability of about 70%. That is still a long way from the "above 90%" suggested in the German and Swiss literature, but also well above the 50%

[49] Tversky and Kahneman 1991.

[50] Tversky and Kahneman 1992, 306.

[51] Kahneman and Tversky 1979, 279.

[52] Kahneman and Tversky 1979, 279.

[53] Tversky and Kahneman 1991, 154. Tversky and Kahneman 1992, 59, report a median value of about 2.25.

[54] Tversky and Kahneman 1992, 59, suggest that the median of the empirically observed values for the difference in weight of gains and losses is about 2.25.

[55] Rachlinski 1996, 118.

[56] Korobkin and Guthrie 1994,133 et seq; Babcock et al. 1995, 296 et seq.; Rachlinski 1996, 130 et seq.

[57] Clermont and Sherwin 2002, 268.

of the "balance of probabilities" of English law. *Zamir* and *Ritov* report just such a decision threshold from an experiment with Israeli lawyers and law students, who work and study in a legal system that uses the Common Law's "preponderance of the evidence" standard for civil cases.[58]

While on average the G/L ratio for which subjects are indifferent between symmetric bets is somewhat over 2, there are considerable inter-individual differences in loss aversion.[59] If loss aversion influenced the decision threshold, then judges with a higher loss aversion, as measured by the G/L ratio, should have a higher decision threshold.[60] A study with a sample of Swiss members of court (judicial clerks and judges) shows that this is indeed the case—judges with higher loss aversion need to be convinced to a higher degree that the plaintiff's allegations are true before they decide in favour of the plaintiff in a civil action.[61]

These results indicate that loss aversion, at least partially, explains the intuitive appeal of a decision threshold that is considerably higher than the 50% posterior subjective probability of the Common Law's standard in civil cases ("more likely true than not"), although loss aversion alone cannot account for the intuitive appeal of a very high decision threshold such as the "almost certainty" required by Civil Law.

7.5.2 Omission Bias

The so called "omission bias" and its close relative, the "status quo bias", may further explain why errors of the type I (granting an unjustified claim) are considered so much more severe than errors of the type II (denying a justified claim). "Omission bias" refers to the tendency to feel more responsible for the negative consequences of acts than those of deliberate omissions. Consequently, regret is higher when an act has negative consequences than when an omission has negative consequences.[62] Correspondingly, actions of third parties that lead to negative outcomes are judged as morally more reprehensible than deliberate omissions with the same consequences.[63] While omission bias is stronger when decision makers anticipate learning the outcome of their decision, it is also present when they are blind to the

[58] Zamir and Ritov 2012, 180.

[59] Fehr and Goette 2007, 300; Gächter et al. 2010, 4.

[60] This requires the further assumption that the judge – who does not himself or herself gain or lose anything from his or her decision – vicariously experiences the gain or loss of the parties. This assumption is plausible, however, based on research that shows that judges are indeed influenced by the party's perspective despite having nothing at stake themselves, see Guthrie et al. 2001, 777.

[61] Schweizer 2013, 20.

[62] Kahneman and Tversky 1982, 173; Ritov and Baron 1990, 274; Gilovich and Medvec 1995, 380; Prentice and Koehler 2002, 610.

[63] Sugarman 1986, 70; Spranca et al. 1991, 82; Kordes-de Vaal 1996, 165; Prentice and Koehler 2002, 593.

outcome.[64] The latter is the situation a judge in a civil law suit is in, as the ground truth generally will not be learnt after the final judgment.

It has been suggested that the distinction between actions and deliberate omissions is due to a "moral overgeneralization."[65] Acts are usually deliberate and their foreseeable consequences intended, while omissions often occur unknowingly and their consequences are therefore unintended, too. However, when an omission is deliberate, there is not an ethically justified distinction between act and omission from the point of view of a consequentialist ethic.[66] Most people seem to apply a generally useful rule—acts are deliberate, omissions negligent if at all—to situations in which it is not applicable.[67]

If granting a civil action that leads to a change in the *status quo ante* filing is perceived as an act, while denying it is seen as an omission, then this could also explain why errors of the type I are considered graver than errors of type II. Note that this is rather arbitrary—in a sense, both are acts; the judge (or jury) cannot refuse to do something and abstain from a decision, he is forced to choose between granting and denying the claim. But it is very comparable to the situation in classic studies of regret and the action/inaction distinction. In one often cited example, an investor sells stock A and buys stock B, while another investor *decides against* selling stock B. Both own stock B when its share price tanks and incur a loss. An overwhelming majority believes the first investor will feel more regret,[68] although technically, "deciding against" is also an act—but one that does not change the status quo.

Zamir and *Ritov* report that Israeli law students anticipate that the more a judge is afraid of making a mistake, the more likely she will deny the claim, and that judges who erroneously[69] granted a claim will feel more regret than judges who erroneously denied a claim.[70] This is in line with the expectations based on the studies on the omission bias.

Using an online-questionnaire, I asked a sample of 156 Swiss members of court (judicial clerks and judges from the Cantons of Bern and Zurich) to decide whether they would grant or deny a request for repayment of a loan. The defendant disputed ever having received the loan, and the evidence in favour of the plaintiff was solid, but not decisive.[71] After having decided, each participant was told that newly discovered incontrovertible evidence proved their decision wrong, and asked to express their regret about the mistaken decision on a scale from 0 to 100. The average

[64] Ritov and Baron 1995, 124.

[65] Kordes-de Vaal 1996, 165; Sunstein 2005, 540.

[66] Sunstein 2004, 1582; Birnbacher 1995, 127, but see 209.

[67] Kordes-de Vaal 1996, 165.

[68] Kahneman and Tversky 1982, 173.

[69] Erroneously here, as throughout this article, means that the claim was granted although it did not exist under the applicable substantive law. It does not mean that the judge made any procedural errors.

[70] Zamir and Ritov 2012, 182.

[71] This is the same sample as the one for the study on the influence of loss aversion on the decision threshold. The results will be reported more fully in my forthcoming Habilitationsschrift.

regret of those granting the claim ($N=65$) was at 55.2 significantly higher than the average regret of those denying the claim ($N=91$) at 39.4.[72] This shows that Swiss judges feel similar to the Israeli students anticipating how Israeli judges would feel and demonstrates that the regret when making a type I error is indeed larger than when making a type II error. If judges strive to minimize their anticipated regret, they should lean towards denying uncertain claims. Again, behavioural insights can show why the intuition is to have a standard of proof that minimizes type I errors at the price of accepting more type II errors.

7.5.3 Status Quo Bias

Status quo bias describes the phenomenon that, *ceteris paribus*, a state of the world is preferred for no other reason than that it is the current state.[73] Changes of the *status quo* need more justification than maintaining the status quo.[74] On the other hand, maintaining the status quo seems justified *per se*. A particularly bitter example for the latter is reported by *Crandall et al* who show that the use of torture in questioning prisoners enjoys greater support if it is described as a long-standing practice rather than something to be newly introduced.[75]

In most cases of civil litigation, it is the plaintiff who requests a change of the *status quo ante* filing. There are exceptions to this rule[76]—negative declaratory actions come to mind—but even then, while the plaintiff does not request a change in status quo in these rare cases, neither does the defendant. In the overwhelming majority of cases, it is the plaintiff that requests a change of the *status quo*, while the defendant wants the *status quo* to be maintained. Deciding in favour of the plaintiff therefore requires more justification than deciding in favour of the defendant, which, translated into standards of proof, means that the standard must be well above 50 % to justify deciding for the plaintiff.

The reasons given for the assignment of the burden of proof to the plaintiff (in most cases) provides anecdotal evidence for the role status quo bias plays in the justification of a high standard of proof in civil cases. The assignment of the burden of proof is obviously the more important, the higher the standard of proof is.[77] In legal systems such as the German and Swiss one, the assignment of the burden of proof is often decisive for the outcome of the litigation, at least when the dispute is about facts that are not easily proven by documentary evidence.[78] Influential voices in the

[72] $t(154)=3.17$, $p<0{,}01$.

[73] Samuelson and Zeckhauser 1988, 8; Kahneman et al. 1991, 197; Schweitzer 1994, 470; Prentice and Koehler 2002, 597; Eidelman and Crandall 2009, 85.

[74] Connolly and Zeelenberg 2002, 213.

[75] Crandall et al. 2009.

[76] Clermont and Sherwin 2002, 268.

[77] Rüßmann 1987, n. 21.

[78] Stölzel 1913, XXXI.

German doctrine argue that it is fair to assign the burden of proof to the attacker (literally "*Angreifer*").[79] In other words, the mere fact that someone wants to change the *status quo* appears to justify making matters difficult for them—because these authors give no reasons as to why the "attacker" should bear the burden of proof, it seems to be self-evident.

7.6 Normative Implications of the Behavioural Insights for the Civil Standard of Proof

The section above has shown how insights from behavioural analysis of human decision-making can explain the ferocious defence of a high standard of proof in civil cases in Germany and Switzerland. But can behavioural insights justify the high standard on normative grounds? In the following, I argue that they cannot.

If the decision threshold should not only minimize "the total expected number of dollars coming from the wrong pockets"[80], but minimize the disutility of the parties, then taking into account loss aversion seems to be normatively justified at first sight.[81] As mentioned above, while taking into account loss aversion cannot justify a decision threshold of "above 90%", it appears to justify one that is well above 50%.

But while loss aversion may explain the intuitive appeal behind a higher decision threshold, it cannot justify it. The main problem is not even that reference points are malleable.[82] In many real world cases, the perceptions of plaintiffs and defendants of the trial's outcome can hardly be manipulated.[83] The basic problem is that there are no convincing reasons for the *status quo ante filing of the suit* to be the relevant reference point.[84] Why should the *status quo ante* the act (or omission) that supports the legal claim not be the relevant reference point? Suppose the act or omission in question may lead to liability. For example, the (future) plaintiff's car has been damaged by the (future) defendant, and the defendant is liable if he has been negligent. The plaintiff may well experience the award of damages by the court as a gain, because by that time—usually years after the accident—the *status quo* is the

[79] Leipold 1966, 48 et seq.; Prütting 1983, 263 et seq. These days, the consensus view is that it is impossible to reduce the assignment of the burden of proof to a single unifying principle, Ahrens 2008, 29 et seq.; Prütting 2009, n. 42.

[80] Kaye 1982, 497.

[81] Zamir 2012, 887 et seq.; Zamir and Ritov 2012, 172. Zamir and Ritov caution, however, against any premature normative conclusions, Zamir and Ritov 2012, 195 et seq.

[82] Korobkin and Guthrie 1994, 120 et seq.; Zamir and Ritov 2010, 262 et seq., 269 (on the malleability of reference points).

[83] Zamir 2012, 889 et seq.

[84] Redmayne 1999, 174.

damaged car,[85] and the compensation is an improvement. The defendant experiences the award as a loss since his current wealth is diminished.[86] But the plaintiff has certainly experienced the damage to his car as a loss from the then relevant baseline "intact car". If erroneously no damages are awarded, the plaintiff is stuck with his initial loss. While he may not experience the loss at the time of judgment, it seems arbitrary to take into account the defendant's loss aversion from the reference point "before filing", but not the plaintiff's loss aversion "before accident".

Now, one can argue that when damages are awarded erroneously, it is *the court* who inflicts a loss on the defendant, while the initial loss to the plaintiff has been inflicted by a private party. If a decision granting the claim is perceived as an act and one denying it as an omission, and the grant of the claim (generally) inflicts an unjustified loss on the defendant, then the perceived fairness of the court will be lower when erroneously granting a claim than when erroneously denying it. But while this may explain the intuitive appeal of a higher standard of proof in civil matters, it hardly provides a normative justification. If substantive law gives the plaintiff a claim and the claim would be granted if the facts supporting it were known to the court, why should the plaintiff bear the consequences of the uncertainty necessarily involved in fact finding? Everybody agrees that the standard of proof cannot be absolute certainty,[87] as then the enforcement of substantive law would be seriously imperilled. But once it is accepted that the administration of justice will never be error free, we must justify the distribution of these errors. Omission bias may provide an intuitive explanation, but hardly a rational basis, to burden the plaintiff with most of the errors.

As to the fear that a standard of proof of a "balance of probabilities" may undermine the perceived legitimacy of the court system and drive a wedge between the populace and its administrators of justice, empirical data does not confirm the concern. The World Values Survey seeks to investigate political and sociocultural change with a standardized survey that is carried out in over 50 countries.[88] In the last wave that is currently fully published (2005–2007), one question asks the respondents—representative samples for the population of each participating country—how much confidence they have in various institutions, among them the courts, police and civil service.[89] Possible answers range from "a great deal", "quite a lot" "not very much" and "none at all". Figure 7.1 summarizes the results for

[85] The fact that in most cases, the car will have been repaired by now makes the argument even stronger.

[86] Note that technically, this is not true. If the defendant were a company, it would have to make provisions for the liability at the time of the accident, because the liability exists irrespective of its enforcement by court order.

[87] Instead of many after him Mittermaier 1843, 74.

[88] See www.worldvaluessurvey.org (last visited 1 February 2014).

[89] "I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?", see WVS 2005 OECD questionnaire, A-Ballot, available from www.worldvaluessurvey.org (last visited 1 February 2014).

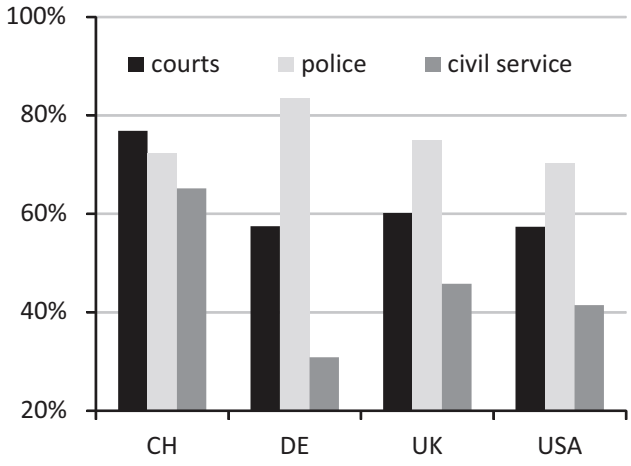

Fig. 7.1 Percentages of respondents having "a great deal" or "quite a lot" of confidence in the respective organizations. (from World Value Survey 2005)

Switzerland (CH), Germany (DE), the United Kingdom (UK) and the USA, giving the percentages of respondents answering with "a great deal" and "quite a lot".

Confidence in the courts and civil service is highest in Switzerland. There is, however, no systematic difference between the two countries in the sample with a standard of proof of "preponderance of the evidence" in civil matters (UK and USA) and those with the higher standard of "full conviction" (Germany and Switzerland). In fact, the US courts score higher than Germany, while the UK and Germany are essentially the same.[90] While the public confidence in the court system may be driven primarily by the criminal justice system—the survey does not differentiate between civil and criminal courts—if the standard of proof in civil cases really undermined the legitimacy of the court system, one would expect to see lower confidence in the UK and the USA versus Germany and Switzerland.

7.7 Conclusion

Behavioural insights can explain the intuitive appeal of a higher standard of proof in civil matters, but they cannot provide a normative justification for it. The visceral rejection any suggestion of a "balance of probabilities" standard of proof in civil matters has received in Civil Law countries such as Germany may be the result of loss aversion, omission bias and status quo bias, which all act together to make a higher standard of proof seem appealing.

Whether the Civil Law's higher standard of proof can be justified on normative grounds at all in the face of the decision theoretic critique is another question. Loss aversion, omission bias or status quo bias do not provide normative bases for a higher standard, primarily because it is not evident why the *status quo ante* judgment should deserve greater protection than the *status quo ante* breach of substantive law. If one considers the primary goal of the administration of civil justice being

[90] The figures for the courts are: CH 76.90%; DE 57.50%; UK 60.20%; USA 57.40%.

the enforcement of substantive law, it is hard to see how a standard of proof above 50 % posterior subjective probability could optimally serve this goal. The picture gets more complicated, however, if one takes into account the incentives provided by different standards of proofs.[91]

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[91] See Demougin and Fluet 2006; Fluet 2010; Kaplow 2012, 756 et seq.

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