Risk Taking in Civil Law Negotiations*

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The decision to negotiate a civil law dispute involves little risk, whereas the decision to go to trial is a risky alternative. *Prospect theory* predicts that when individuals must choose between such alternatives, they will either (a) be biased toward the risk-free alternative in a *gain frame* (i.e., when they perceive both prospects as gains), or (b) be biased toward the risky alternative in a *loss frame*. The decision of the plaintiff to either continue negotiations or go to trial is typically done in a gain frame; the defendant has to choose between losses. Thus, it was hypothesized that plaintiffs are risk aversive and defendants risk seeking in negotiations. Alternatively, it was hypothesized that parties who expect to prevail at trial are risk aversive, and parties who expect to lose are risk seeking. In four experiments, with both laymen and law students as subjects, the first hypothesis received some support, and the second hypothesis was strongly supported.

Most civil law disputes are resolved through a negotiated settlement and never reach the court (Danzon & Lillard, 1983; Ross, 1980; Viscusi, 1988). That does not mean that the (expected) judicial decision is unimportant for the negotiators. During negotiations, parties continually have to decide whether it is still worthwhile to aim at a settlement or whether negotiations should be broken off and the decision left to a judge.[1] It is generally assumed that parties break off negotiations if they expect a lawsuit to produce a more favorable outcome (of course, compensating for the extra costs that may accrue from a trial).

The decision to settle or to sue involves a choice between the relatively risk-free alternative of negotiations and the relatively risky alternative of going to

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[1] The Dutch legal system, like most legal systems in the world, does not use a jury.

court. In studies of the decision to settle or to sue, it is usually assumed that parties are risk neutral; that is, that parties are biased neither towards continuing negotiations nor towards breaking off negotiations (Danzon & Lillard, 1983; Priest, 1985; Priest & Klein, 1984; Wittman, 1985; an exception is Viscusi, 1988). There is, however, no reason to assume that all parties are risk neutral nor that they decide the same under the uncertainty of a prospective judicial decision. Some parties in some cases may be risk aversive (i.e., prefer a risk-free alternative to a risky alternative). Other parties may be risk seeking (i.e., prefer a risky alternative to a risk-free alternative). Repeat players, for instance, can take more cases into account than one-shotters and consequently will be able to take more risk in an individual dispute, even if they are generally more risk neutral than one-shotters. One-shotters will deviate from risk neutrality more and be either risk aversive or risk seeking, depending on the characteristics of the case. Further, some individuals might be inclined to take more risk than others (Vidmar & Schuller, 1987).

In the present study, the influence of two other factors on decision making by parties under uncertainty is investigated: (a) the role of the party (plaintiff[2] or defendant) and (b) the difference between parties who expect to win in court and parties who expect to lose in court. Hypotheses as to the effect of these factors on decision making are derived from Tversky and Kahneman's *prospect theory* (1981; Kahneman & Tversky, 1979).

The Decision to Settle or to Sue

For a risk neutral plaintiff, the rewards associated with starting a lawsuit depend on the estimated chance of winning in court, the size of the claim, and the expected extra costs of a lawsuit (Priest, 1985; Priest & Klein, 1984; Viscusi, 1988; Wittman, 1985). If the discussion is limited to cases in which the judge can only choose between awarding and denying the claim, the subjective expected value of going to court for the plaintiff equals $pV - C_{pl}$; where p is the expected probability of winning, V the total claim and C_{pl} the extra costs of a lawsuit. Subjective expected utility theory (Savage, 1954), then, predicts that a plaintiff weighs each offer of the defendant against the so-called certainty equivalent (CE_{pl}) of going to court, where $CE_{pl} = pV - C_{pl}$. The plaintiff will accept any offer from the defendant during negotiations that is larger than or equal to CE, in other words: The outcome at which the plaintiff is indifferent to either settling or breaking off negotiations—hereafter called resistance point (RP; Raiffa, 1982)—equals CE_{pl}. The defendant, according to subjective expected utility theory, can be expected to behave analogously: $CE_{def} = (1 - q)V + C_{def}$, where q is the chance of winning as perceived by the defendant.[3] It is predicted that the defendant will accept any demand by the plaintiff that is smaller than or equal to CE_{def}: $RP_{def} = CE_{def}$.

Subjective expected utility theory has been most useful for generating nor-

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[2] I use the terms *plaintiff* and *defendant* also for parties who are in the process of negotiating, although they only take these roles formally after a lawsuit has started.

[3] The subjective estimates of the parties, p and q, respectively, of course do not have to add up to 1.

mative models of decision making under uncertainty, but has failed to give an accurate description of actual behavior of individuals in such situations. In many instances, individuals deviate from the models prescribed by subjective expected utility theory. Relevant to the decision to settle or to sue is Tversky and Kahneman's *prospect theory* (1981; Kahneman & Tversky, 1979). Prospect theory predicts that decision makers treat the prospect of gains and losses quite differently. Consider the following two questions I put to two separate groups of subjects (for each group $n = 51$; Question A[4] involves the prospect of gains, Question B, losses):

    A. Which of the following two alternatives would you prefer?
       1. A chance of 45% to win Dfl.6000.[5]
       2. A chance of 90% to win Dfl.3000.
    B. Which of the following two alternatives would you prefer?
       1. A chance of 45% to lose Dfl.6000.
       2. A chance of 90% to lose Dfl.3000.

Within each question, Alternative 1 has the same expected value as Alternative 2, but Alternative 1 involved more risk than Alternative 2. Question B is the mirror image of Question A. Of the subjects who answered Question A, however, 14% chose the risky alternative; of the second group of subjects answering Question B, 87% chose the risky alternative.

Generalizing from questions such as those above, prospect theory predicts that individuals are risk aversive (i.e., prefer a certain outcome over a risky one) when evaluating the prospect of gains, and are risk seeking when evaluating the prospect of losses. The predictions of prospect theory have been widely supported in research, both for behavior in negotiations (Neale & Bazerman, 1985; Neale, Huber, & Northcraft, 1987; Schurr, 1987), and for behavior in other situations (Budescu & Weiss, 1987; Cohen, Jaffray, & Said, 1987).

The difference in responses to the two questions is conceptualized in terms of a *decision frame;* that is, a "decision-maker's conception of the acts, outcomes, and contingencies associated with a particular problem" (Tversky & Kahneman, 1981, p. 453). A decision frame, either induced in or adopted by an individual, influences the individual's view of a decision problem and may influence the individual's decision. One general characteristic of framing is that individuals perceive prospects as gains and losses, rather than final states of individual welfare. Gains and losses are defined relative to a *reference point,* which usually is the status quo (Kahneman & Tversky, 1979, p. 274). The status quo is used as a reference point for gains and losses, if the status quo is considered neutral. Especially if recent changes of welfare took place, individuals may use another point of reference (Budescu & Weiss, 1987).

In most civil law disputes, the plaintiff wants something the defendant can provide, usually money. If it is assumed that both parties use the status quo at the

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[4] Question A was also used by Kahneman and Tversky (1979) with identical results.
[5] Dfl.1 approximately equals US$0.50.

time of the dispute as their reference point, the decision of the plaintiff is done in a gain frame: He can choose between a relative risk-free, but minor gain through a settlement and a more risky, but higher gain through a lawsuit. Likewise, the decision to settle or to sue by the defendant is done in a loss frame. As said, the resistance point (RP) of a risk neutral plaintiff equals his CE_{pl}. If predictions of prospect theory hold for plaintiffs in a civil law dispute, a plaintiff will value a settlement relatively more (i.e., $RP_{pl} < CE_{pl}$) and will give in more in negotiations. Likewise, it can be predicted for the defendant that risk seeking causes the defendant's resistance point to diminish (i.e., $RP_{def} < CE_{def}$). As a consequence, defendants will yield less in negotiations.

Although the status quo at the time of the dispute may seem the most obvious reference point in terms of prospect theory, it is not the only possible one. Budescu and Weiss (1987) suggested that the reference point may deviate from the status quo especially in situations where recent changes in wealth took place. If a dispute is considered as an interaction where each party perceives an opposing point of view as more or less right, that position of each party may be the reference point they measure their expectations about negotiations and lawsuits from. A party—either plaintiff or defendant—who expects to lose in court may experience both the trial and the negotiations to involve losses. If a dispute is perceived as such by a party, the decision to settle or to sue is done in a loss frame. What is perceived as a loss by this party, however, may very well involve a transfer of money from an adversary to that party, but apparently less than he or she expects or deems just. A party who expects to win at trial may perceive the decision to settle or to sue as a decision among gain alternatives, even though winning might oblige him to give money to his adversary, but apparently less than expected or is considered just.

The most natural division between the expectations to win and the expectations to lose a trial can be set at 50% chance of winning. Therefore, it is hypothesized that parties who perceive a chance of winning in court higher than 50% are risk aversive in negotiations (i.e., $RP_{pl} < CE_{pl}$ and $RP_{def} > CE_{def}$), whereas parties who perceive a chance lower than 50% to win a trial are risk seeking in negotiations (i.e., $RP_{pl} > CE_{pl}$ and $RP_{def} < CE_{def}$).

In the present study, the two hypotheses—(a) defendants are risk seeking and plaintiffs are risk aversive and (b) parties who see themselves as likely winners are risk aversive whereas those who see themselves as likely losers are risk seeking— were tested under varied conditions in four experiments. The subjects actually never negotiated because during negotiations both the expectations about a possible lawsuit and the party's resistance point are likely to change continuously. The initial resistance point and expectations of chance in court before the negotiations started reflect a party's assessment of negotiations and lawsuits much more than after the interactions in negotiations took place.

Civil law permits us to vary the role of a party from plaintiff to defendant in certain kinds of cases, without changing the legal content of the case. In the experiments, this was done by presenting a purchase dispute to the subjects in two versions: either the buyer had or had not paid before the dispute arose. In the first

version, the buyer becomes plaintiff and the seller defendant, and vice versa in the second version.

In Experiment 1, two buyer roles—in a plaintiff and in a defendant version—were presented to subjects. Besides that, no money was paid to the subjects and the chance of winning in court was not given but estimated by the subjects themselves. Experiment 2 was identical to Experiment 1, except that the subjects played for money. Experiment 3 differed from Experiment 2, in that the chance of winning in court was given and the seller roles were played also.

In the third experiment, the buyers had a 40% chance to win in court; the sellers, a 60% chance. In Experiment 4, therefore, the number of conditions was doubled, such that versions of the case were also presented to subjects where the buyers had a 60% chance of winning in court and the sellers, a 40% chance. In Experiment 4, however, no money was paid to the subjects.

METHOD

Case Used

All four experiments were run, using versions of the following case:[6]

> In December, 1987, you decided to buy a young dog for your children. You contacted the breeder of cocker spaniels, K. de Waard, in Amsterdam, and decided to buy a recently born puppy. The breeder did not guarantee the dog, nor were special conditions of sale agreed upon. The dog sold for Dfl.1000.[7]
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> On December 17, 1987, you collected the dog at the age of 10 weeks. Two weeks later, you took the dog to the veterinarian for the usual vaccination against several diseases. During the general examination of the dog at that occasion, the veterinarian discovered an innate, but very rare, heart defect. Later, it turned out that both parents of the puppy were carriers, but did not suffer from the disease overtly. The puppy died a month later from the disease.

This case was specifically chosen for the experiment. A purchase case was needed to ensure that for the same party, a plaintiff and a defendant version could be written without changing any of the legal content of the case. The death of the puppy was to ensure that, at the time of the dispute, nothing valuable was left of the purchased goods, so that the dispute was over money alone.

Experiment 1: No Money, Unknown Chance

Subjects

Subjects were 133 psychology students from Leyden University. All subjects participated during a class simultaneously. The subjects participated without any payment.

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[6] Of course, the cases and the questions are translated from Dutch.
[7] About US$500.

Versions of the Case

All subjects were asked to imagine that they had bought the dog. For half of the subjects, the information was included that the payment of the dog was done by a bank transfer the day after the puppy was collected. The other half of the subjects were told that the breeder agreed to payment after 2 months, the result being that the dog was not paid for the day it died. As a consequence of this manipulation, the first-mentioned half of the subjects were to imagine the role of plaintiff in the experiment, while the other half played the role of defendant.

Procedure

After reading the case, the subjects were asked what chance they expected to have in winning this case if it was brought before the cantonal court (small claims court). Subsequently, the subjects were asked for their resistance point. Of course, this question was phrased differently for the plaintiffs and for the defendants: The plaintiffs were asked the minimum amount they would accept from the breeder to prevent them from going to court. The defendants were asked how much they ultimately were prepared to pay to avoid a trial.

Experiment 2: Money, Unknown Chance

Subjects

Subjects were 96 law students at Erasmus University Rotterdam. The subjects were invited to participate through an advertisement in the university's weekly newspaper in which it was announced, among other things, that subjects could earn between Dfl.0 and Dfl.100 (i.e., up to US$50). The subjects were paid, but payment varied, as is explained below. The subjects participated in a class-room-like situation, but separately in two rooms for the two conditions of the experiment.

Versions of the Case

The versions of the case used in this experiment were identical to the ones used in Experiment 1: Half the subjects took the role of plaintiff; and the other half took the role of defendant, but all were buyer of the dog.

Procedure

The subjects were asked to read the case twice. After reading the case the first time, the procedure of the simulation was explained. For the subjects who played plaintiff, the instruction was as follows:

> 1. You are the buyer of the puppy. The experimenter plays the role of seller.
> 2. Each party proposes one and only one offer. You are the first to make an offer. No interaction will take place between the parties.
> 3. After you determine the lowest refund you are prepared to accept from the seller, you write that amount down on the loose page. After everybody is ready, the experi-

menter announces the highest amount he is prepared to refund. That amount has been determined in a pilot study.

    4. Two situations may arise:

        A. If the seller is prepared to refund more than you want, apparently a basis for negotiations exists. The seller then pays you 10% of the amount you wrote down, and the simulation ends for you.

        B. If the seller wants to refund *less* than you want to have, there apparently is no room for negotiations. In that case, "the judge" has to decide.

    5. The decision of "the judge" is simulated as follows: A previous study showed that not everybody would give the same decision in this case. Therefore, the judicial decision is simulated by drawing a marble from an urn with red and white marbles. If a red marble is drawn, the seller wins the trail and you receive nothing. If a white marble is drawn, you win the trial and you receive Dfl.100 (10% of the claim). The ratio of red and white marbles reflects the real chance of winning in court and has been determined in a pilot study as well.

    6. The problem you are facing now is as follows. The lower the amount you want as a refund, the more likely a settlement will ensue. A settlement is the most favorable to you if the refund you are prepared to accept equals the refund the seller is prepared to pay. The larger the refund you want, the more likely a lawsuit is and the more likely you go home with all or nothing.

After this instruction, several examples were given, to ensure complete understanding of the procedure. The procedure for the defendant subjects differed from the procedure for the plaintiff subjects in that the defendants received Dfl.100 at the start of the experiment in 20 notes of Dfl.5 as playing money. They were asked to check the number of notes to give them the feel of the money.

Experiment 3: Money, Known Chance

Subjects

As in Experiment 2, the subjects were law students from Erasmus University Rotterdam ($N = 102$). The subjects were invited to participate through an advertisement identical to the one used in Experiment 2. The subjects were paid, as is explained below. The subjects participated in a classroomlike situation, but separately for the seller/defendant and buyer/plaintiff condition and the seller/plaintiff and buyer/defendant condition, respectively.

Versions of the Case

Two versions of the case were identical to the ones used in Experiment 1 and 2: A quarter of the subjects took the role of buyer/plaintiff; a quarter took the role of buyer/defendant. Two additional versions of the case were used: a seller/defendant version and a seller/plaintiff version. For these last two versions, the case was rephrased to the perspective of the seller of the dog ("You are a breeder of cocker spaniels. In December, 1987 . . ." etc.). All buyers were given a 40% chance to win in court; all sellers had a 60% chance of winning.

Procedure

Half of the subjects were invited to come to a classroom. They were told that a simulation was to take place in which two roles were available. Without reveal-

ing the roles, the subjects could choose between two piles of envelopes, which contained either the role of the seller/plaintiff or buyer/defendant. Simultaneously, the other half of the subjects, invited to another room, could choose between the role of seller/defendant and buyer/plaintiff. In both groups, the subjects who had the role of defendant were given Dfl.100 in 20 notes of Dfl.5. In order to emphasize the contrast between the two roles, the defendant subjects were asked to check the number of notes. After reading the case once, the subjects were instructed as follows (given is the instruction for the seller/defendant; the other instructions were *mutatis mutandis* the same):

> 1. The participants to this experiment are divided into two groups: one group plays the buyer of the puppy, the second group plays the seller. You are one of the sellers. *After* you answer the questions, a buyer is paired at random to each seller. The buyer that is paired to you is your adversary. You received Dfl.100 at the start of the experiment.
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> 2. You are requested to write down on the loose page what amount of money you are prepared to repay to the buyer at a maximum. The participants, who play the role of buyer, are also asked to write down an amount of money, namely, what they are prepared to accept as a minimum refund. There will be no direct negotiations between the parties.
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> 3. After everybody answers the questions, your adversary is picked at random and you will find out how much he or she will accept as a minimum amount for the settlement.
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> 4. Two situations can arise:
>> A. If the amount of money the buyer is prepared to accept is lower than the refund you are prepared to give, the simulation ends for you both. You give your adversary 10% of his lowest acceptable refund. You can keep 10% of the difference between Dfl.1000 and the refund you were prepared to give. The rest—if any—is given to the experimenter.
>> B. If the buyer wants a refund that is larger than you are prepared to give, there apparently is no room for negotiations. In that case, "the judge" has to decide.
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> 5. The decision of "the judge" is simulated as follows: A previous study showed that not everybody would give the same decision in this case. Therefore, a legal decision is simulated by drawing a marble from an urn with red and white marbles. If a red marble is drawn, you have won the trial and do not have to give anything to your adversary. If a white marble is drawn, the buyer has won the trial and you are obliged to give him or her Dfl.100. The ratio of red and white marbles reflects the real chance of winning in court. Of the 100 marbles in the urn, 60 are red and 40 are white.
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> 6. The problem you are facing now is as follows. The larger the refund you are prepared to give, the higher the chance of a settlement with your adversary. The lower the refund you are prepared to give, the higher the chance that "the judge" has to decide and the higher the chance that you end up with all or nothing.

After this instruction some examples were given to ensure full understanding of the procedure.

Experiment 4: No Money, Known Chance

Subjects

In Experiment 4, the subjects were randomly drawn from a subject panel maintained by the Nederlands Instituut voor Publieke Opinie- en Marktonderzoek (Nipo), a commercial marketing bureau. The 703 subjects received no payment for

their participation. The group of subjects, representative of the Dutch population, was specifically chosen to study some differences that I found between the psychology students in Experiment 1 and the law students in Experiments 2 and 3 (see the Results section).

Versions of the Case

Eight versions of the case were presented to the subjects. Of course, each subject only responded to one version. Four versions were identical to the ones used in Experiment 3. In four additional versions, the chances of winning for the buyer and seller roles were reversed, such that in these versions the buyers were given a 60% chance of winning in court and the sellers a 40% chance of winning. The designs of the experiments are summarized in Table 1.

Procedure

The subjects responded to the case and questions on their home computer, supplied by Nipo. The case and questions were transmitted to their computers through a link with the Nipo mainframe, which also ensured a random division of versions of the case over subjects.

After reading the case once, the subjects were instructed as follows (given is the instruction for the seller/defendant who had a 60% chance of winning; the other instructions were, *mutatis mutandis*, the same):

> You contact an attorney to negotiate for you with De Waard and to defend you in a lawsuit, if necessary. Your attorney wants to know how far you want to go in negotiations. If De Waard wants back more money than you are prepared to repay, he probably will start a lawsuit. Then, the cantonal judge may decide that you have to repay the full Dfl.1000. The judge may also decide that you do not have to repay anything. Your attorney estimates the chance that you will win in court at 60%.

Table 1. Design of Experiments and Number of Subjects per Condition

Subject	Dog not paid			Dog paid		
	Role	Chance	N	Role	Chance	N
Experiment 1: No money, unknown chance						
Buyer	Defendant	Estimated	67	Plaintiff	estimated	66
Experiment 2: Money, unknown chance						
Buyer	Defendant	Estimated	48	Plaintiff	estimated	48
Experiment 3: Money, known chance						
Buyer	Defendant	40	26	Plaintiff	40	25
Seller	Plaintiff	60	26	Defendant	60	25
Experiment 4: No money, known chance						
Buyer	Defendant	60	79	Plaintiff	60	95
Seller	Plaintiff	40	91	Defendant	40	83
Buyer	Defendant	40	96	Plaintiff	40	96
Seller	Plaintiff	60	84	Defendant	60	78

Thereafter, the subjects were asked how far they wanted to go in negotiations. The phrasing of the question of course depended on the version of the case.

RESULTS

All analyses were done on the difference between the resistance point (RP) of the subjects and their certainty equivalent of going to court (CE). In the experiments where the chance of winning was unknown, for each subject the CE was computed from the individually indicated chance of winning and the total claim. Subjects who estimated their chance of winning as exactly 50% were omitted from the analyses, because their estimate could neither be classified as expectations to win or to lose in court (see Table 2).

For the first two experiments, a 2 × 2 Chance (above 50% vs. below 50%) × Role (plaintiff vs. defendant) ANOVA was run. For Experiment 1 (no money, unknown chance) both factors had a large influence on the risk taking of the subjects in the expected direction. The buyers of the dog who perceived a high chance of winning were prepared to pay Dfl.81 more for the dog in negotiations than their CE, thus reducing the risk of a lawsuit considerably. In contrast, the buyers who perceived a low chance of winning in court wanted to pay Dfl.304 *less* than their CE.[8] Also, the role of the party (plaintiff vs. defendant) had an influence on the risk behavior of the subjects. As expected, defendants were risk seeking. Plaintiffs were, contrary to expectations, also risk seeking, but significantly to a lesser extent than the defendants. Plaintiffs on an average wanted to pay Dfl.134 less than their individual CE; defendants wanted to pay Dfl.304 less than their individual CE.[9]

In Experiment 2 (money, unknown chance), the same results were found for the chance factor: Subjects who perceived a high chance of winning wanted to pay Dfl.124 more for the puppy than their individual CE, and thus were risk aversive; subjects who perceived a low chance of winning, wanted to pay Dfl.160 less than their CE, and thus were risk seeking. The role factor did not have an influence on the risk behavior of the parties; both plaintiffs and defendants were slightly (for an amount of about Dfl.20) risk seeking.

In Experiment 3 (money, known chance), a 2 × 2 factorial design was used. Again the factor role (plaintiff vs. defendant) did not have an influence on risk behavior: Both plaintiffs and defendants were slightly risk seeking. The chance factor (fixed at 60 vs. 40%), however, again produced a significant difference in risk behavior: In the 60% conditions, the subjects deviated only Dfl.2 from their CE, indicating that a high chance of winning induces risk neutrality; in the 40% conditions, the subjects wanted to pay Dfl.166 less than their CE, thus being highly risk seeking.

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[8] All means are given in the range of Dfl.0 to Dfl.1000.
[9] Here, and in the other analyses, no significant interactions were found, so I refrain from reporting them.

Table 2. Mean Difference Between Certainty Equivalent and Resistance Point for Conditions in Four Experiments

	Mean difference[a]	SD	F	df
Experiment 1: No money, unknown chance				
Role				
Defendant	−304	352	14.0	1,120[b]
Plaintiff	−134	258		
Chance of winning				
<50%	−304	291	45.6	1,120[b]
>50%	+81	227		
Experiment 2: Money, unknown chance				
Role				
Defendant	−22	173	1.4	1,76[c]
Plaintiff	−20	142		
Chance of winning				
<50%	−160	159	66.3	1,76[b]
>50%	+124	158		
Experiment 3: Money, known chance				
Role				
Defendant	−66	182	2.5	1,100[c]
Plaintiff	−39	147		
Chance of winning				
40%	−166	164	24.8	1,100[b]
60%	+2	175		
Experiment 4: No money, known chance				
Role				
Defendant	−96	301	60.0	1,694[b]
Plaintiff	+61	297		
Chance of winning				
40%	−60	294	67.9	1,694[b]
60%	+108	302		
Role				
Seller	+141	278	134.8	1,694[b]
Buyer	−90	301		

[a] The average differences in guilders between CE and RP are depicted; a positive mean difference betweep RP and CE indicates a relative risk aversive RP (i.e., for plaintiffs $RP_{pl} < CE_{pl}$) and for defendants $RP_{def} > CE_{def}$. The total claim is Dfl.1000 in all four experiments; the means are given on that scale.
[b] $p < .001$.
[c] n.s.

Note that in Experiment 3 the Chance factor is fully confounded with the factor Seller Versus Buyer. Therefore, in a fourth experiment, these factors were separated, resulting in a 2 × 2 × 2 factorial design, Chance (40 vs. 60%) × Role (plaintiff vs. defendant) × Role (seller vs. buyer). Again, the Chance factor produced a significant difference in risk behavior: The subjects with a high 60% chance of winning in court were risk aversive; the subjects with a low 40% chance were risk seeking. As in Experiment 1, but in contrast with Experiments 2 and 3, the defendants and the plaintiffs differed in risk-taking behavior. As predicted,

defendants in Experiment 4 were risk seeking, and as predicted, the plaintiffs were risk aversive.

The third factor in Experiment 4, the seller versus buyer role, produced a significant difference as well. This effect, however, warrants a different explanation. The mean amount of money the subjects thought should be paid in the end for the puppy was Dfl.351 and in neither of the conditions did the mean exceed Dfl.469. This indicates that all subjects were biased towards the position of the buyer of the puppy. The rescaling from these resistance points to a difference between RP and CE, then, produced a significance difference between sellers and buyers, because a general bias in favor of the buyer seems to result in risk-aversive behavior of the sellers and in risk-seeking behavior of the buyers.

DISCUSSION

In this series of experiments, two hypotheses were tested: (a) When deciding between settling or suing, defendants are risk seeking and plaintiffs are risk aversive; and (b) parties who perceive themselves as potential losers in court are risk seeking, whereas parties who perceive themselves as potential winners are risk aversive. The first hypothesis was supported only in Experiments 1 and 4, the two experiments without payment and with laymen as subjects. In contrast, in both Experiments 2 and 3, where the first hypothesis was not supported, there *was* payment and the subjects were law students. These design differences between Experiments 1 and 4, on the one hand, and Experiments 2 and 3, on the other, may explain the mixed results I found for the first hypothesis.

Let us first examine the possible influence of payment. In Experiments 2 and 3, subjects played for real and, for students, substantial amounts of money. Budescu and Weiss (1987) contended that real and substantial money augments the motivation of subjects. The problem remains, however, that it was considered unethical to have students in the defendant conditions play with their own money.[10] In the experiments, the subjects who played the role of defendant were supplied with Dfl.100 prior to the experiment to play the simulation. Every effort was taken to give them the feeling that it was their own money: The money was given at the start of the experiment, the subjects were asked to count the notes to give them the feel of the money, and they performed a filler task to expand the time they had the money in their possession. It is unlikely, however, that I succeeded completely in giving these students the feeling that they were playing with their own money. It may be that they considered themselves only as temporary holders of the money and aimed their decision making at the difference in wealth between entering the room and leaving. This could mean that subjects who have to imagine that money is involved (as in Experiments 1 and 4) more closely reflect the decision-making processes of actual disputants.

The second explanation for the mixed results is related to differences in

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[10] And it may be difficult to find enough students at our university to cooperate in future experiments.

perception of disputes between laymen and lawyers. The hypothesis that defendants are risk seeking and plaintiffs are risk aversive is based on the assumption that parties perceive the outcome of negotiations and a trial as gains and losses relative to the status quo at the time of the dispute. This apparently is true for the laymen in Experiments 1 and 4. A judge, however, looks upon a dispute from a different perspective: He or she considers what rights and duties arose from the dispute, rather than judge the coincidental status quo that emerged. In a case like this one, this means that a judge is concerned with which party should bear the costs of the dog and not so much with the transfer of money that may result from the verdict. The same point of view may be taken by lawyers, who anticipate a judicial decision: Lawyers—and probably also partly trained lawyers as law students—will focus on the rights and duties that arose from the death of the puppy and ignore who accidentally became plaintiff and defendant.

Whether or not a difference in risk behavior between plaintiffs and defendants exists remains unanswered by these experiments. Viscusi (1988) found partial support for this hypothesis, but his results were not very convincing either. He used aggregated data and found a weak effect, and that effect only for product liability disputes where the (relatively risk aversive) plaintiff is usually an individual and the (relatively risk seeking) defendant, a firm or insurance company.

If the laymen in the experiments best approximate disputants in civil law cases, and a difference in risk behavior does exist between plaintiffs and defendants, then that difference might explain the propensity of plaintiffs to win in court (McEwen & Maiman, 1986; Yngvesson & Hennessey, 1975; for another view see Vidmar, 1984; 1987). Disputes that end up in a court will likely have a high percentage of plaintiffs who are risk aversive and defendants who are risk seeking, resulting in most trials ending in favor of plaintiffs.

A comparable analysis can be made of the second hypothesis that was tested in the four experiments: Parties who expect to lose in court are risk seeking, whereas parties who expect to win in court are risk aversive. A substantial difference in risk taking between winners and losers was found in all four experiments. The winners were also risk seeking, although to a substantially lesser extent than the potential losers.

The boundary between prospective winners and prospective losers was set at an estimated 50% chance of winning in court. The group of winners, therefore, consists of subjects whose estimations cover the whole range between a little more than 50% and 100%. Likewise, the estimations by the so-called losers cover the range between a little less than 50% and nil. That does not mean that a large deviation from the "neutral" prospect of 50% chance in court is necessary to find a difference between losers and winners in risk taking. In Experiments 3 and 4, where the given chances deviated only 10% from 50 in each direction—winners had a 60%, losers a 40% chance—the difference in risk taking was found as well.

The differences I found between winners and losers support the finding of Neale and Northcraft (1986). In a study of negotiations in a market situation, they found that negotiators in a gain frame outperform negotiators in a loss frame. The same appears to happen in civil law disputes. Potential winners negotiate not only more rationally, but also more wisely than potential losers. The resistance point

of the winners is closer to their certainty equivalent of going to court: The mean difference between the resistance point and the certainty equivalent of going to court is smaller for winners than for losers, but also the standard deviation of the difference is consistently smaller for winners. Alternatively, parties who perceive themselves as potential losers in court take too much risk in negotiations and as a consequence run a greater risk of ending up in court, where they have a relatively large chance of losing. So, losers are not just losers because they have a weak case—they make themselves even greater losers by their risk taking.

The systematic difference in bias I found between potential winners and potential losers will have an influence on the disposition of disputes in court. The risk-seeking losers (if plaintiffs) will sue or (if defendants) be sued too often. Priest and Klein (1984), in their analysis of the selection of disputes, argued that a party's estimate of the likelihood of prevailing at trial is related to the precision with which he or she believes the judicial decision can be predicted. The present study shows that, in addition, the risk parties take in the decision to settle or to sue can play an important role in who prevails in court: Parties often lose in court because they took too great a risk.

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