

CHAPTER 4

VALUE OF A CHANCE

Summary: This chapter introduces the technique whereby the present value of an uncertain hypothetical event is calculated by taking the value of that event as a certainty and then reducing it by a percentage to allow for the contingency of non-occurrence. The technique is applicable equally to past and future losses. The technique is distinguished from proof in a civil court on the balance of probabilities. The determination of the percentage chance may have regard to historical statistics but will more often be based on subjective value judgments. The analysis of chances according to subjective considerations has been a major field of study for analysts of utility.

[4.1] DEFINITION

[4.1.1] Value of a chance: This is the technique of damages assessment for uncertain loss whereby the court awards a proportion of what the loss would have been if it were certain to occur:

'A related aspect of the technique of assessing damages is this one; it is recognised as proper in an appropriate case, to have regard to relevant events which may occur, or relevant conditions which may arise in the future. Even when it cannot be said to have been proved, on a preponderance of probability, that they will occur or arise, justice may require that what is called a contingency allowance be made for a possibility of that kind. If, for example, there is acceptable evidence that there is a 30 per cent chance that an injury to a leg will lead to an amputation, that possibility is not ignored because 30 per cent is less than 50 per cent and there is therefore no proved preponderance of probability that there will be an amputation. *The contingency is allowed for by including in the damages a figure representing a percentage of that which would have been included if amputation had been a certainty*'¹

A notable feature of this technique is that if the amputation becomes necessary the victim will, despite diligent investment of the compensation money, have only 30% of the full cost of the surgery. It is not possible to reconcile this consideration with popular concepts of *restitutio in integrum*. It nonetheless remains a valid technique for dealing with uncertain loss, which highlights the true nature of an award of damages for uncertain loss. The value calculated using the technique of value of a chance is a fair price to pay now for the uncertain prospect of surgery in the future. In other words **it is the present utility of the loss as a component of the victim's life plan**. It is the essence of compensation as distinct from restitution. Restitution is achieved but only in the abstract sense of topping up the present value of the utility of the victim's life plan. The technique of value of a chance permeates every aspect of uncertain loss, including a continuing loss of earnings and a continuing loss of

¹*Burger v UNSBIC* 1975 4 SA 72 (W) 75D-G (emphasis supplied); approved in *Blyth v Van den Heever* 1980 1 SA 191 (A) 225-6; see too *Van Oudtshoorn v Northern Assurance* 1963 2 SA 642 (A) 650-1; *Kwele v Rondalia Assurance* 1976 4 SA 149 (W) 152-3; *Goedhals v Graaff-Reinet Municipality* 1955 3 SA 482 (C); *Wilson v Birt* 1963 2 SA 508 (D) 517.

support. I will in coming chapters examine the manifestations of this phenomenon in the context of continuing loss.

[4.1.2] Intuitive downward adjustment: In many instances the court does not explicitly identify a percentage chance of occurrence. Instead the value of the chance is assessed directly as a sum of money already reduced to the required extent.² This would seem to be the manner in which the technique was known to the Roman-Dutch authorities. Grotius, for instance, records that present and certain losses are worth more than future and uncertain losses.³ Buchanan records that the principle has for some time been implicit to the assessment of general damages.⁴ Reinecke aptly describes this process of discounting for risk and uncertainty as follows:

`Hoe hoër die waarskynlikheid van vervulling wat bewys word, hoe groter sal die waarde van die vermoënsverwagting natuurlik wees totdat dit uiteindelik die waarde van die vermoënsreg waarop dit gerig is, ewenaar'.⁵

[4.1.3] Past loss: The technique of value of a chance applies not only to future losses but also to uncertain past losses. The *locus classicus* is *Chaplin v Hicks*.⁶ The plaintiff had been one of 50 finalists from an original 600 entrants for a competition. From these 50 finalists were to be selected twelve winners each of whom was to receive a three-year acting engagement, the top four at £5 per week, the next four at £4 per week and the remaining four at £3 per week. Due to the wrongful act of the defendant the plaintiff was denied the opportunity to present herself for the decisive personal interview. The jury made an award of £102. Had the plaintiff succeeded to a £4 per week contract she would have received about £600 in total. She was thus awarded some 17% of the value of the contract as a certainty. The award was confirmed on appeal, it being argued that what the plaintiff had lost was not the prize itself but the opportunity, or chance, to win the prize. This matter, it deserves note, was concerned with *past* loss of earnings.

[4.1.4] Future loss: With future loss the technique of value of a chance tends to become obscured by misplaced emphasis on the 'period' over which future loss of income or support is to be discounted. The remarriage prospects of a widow have, for instance, been couched in terms of a period until remarriage.⁷ This is an erroneous and misleading form of analysis because the vast majority of widows will

²*Blyth v Van den Heever* 1980 1 SA 191 (A) 226C; see too *Van Oudtshoorn v Northern Assurance* 1963 2 SA 642 (A) 650-1 (chance of epilepsy).

³Grotius *Inleiding* 3.32.16 `... onzeker ende toekomst goed niet soo veel waard en is, als het zekere ende tegenwoordige'.

⁴Buchanan 1960 *SALJ* 187.

⁵Reinecke 1976 *TSAR* 26 31.

⁶*Chaplin v Hicks* [1911-13] All ER 224 (CA) followed in *Trichardt v Van der Linde* 1916 TPD 148; *Davies v Taylor* [1974] AC 207 (HL) 213. See too McGregor 'Damages' 14ed 196-203; Luntz 'Damages' 2ed 82-3 'A plaintiff who has been deprived of all or part of his earning capacity has in reality lost the chance of exploiting that capacity to the full'; Cooper-Stephenson & Saunders 'Damages in Canada' 91-8.

⁷*Legal Insurance v Botes* 1963 1 SA 608 (A) 617inf; Boberg 1966 *SALJ* 402 407-9 'Remarriage is relevant because it reduces the period of dependency'; Boberg 1988 *BML* 55 56 'The whole object of reducing damages for remarriage is to ensure that, theoretically, nothing remains of the award by the time the widow remarries'.

never remarry.⁸ Thus, for example, a 10% remarriage deduction for a widow aged 50 converts to a period until remarriage of 25 years,⁹ that is to say remarriage at age 75. Clearly an absurd conclusion. The widow will either remarry within a few years after the death or not at all.¹⁰

Another example of the future loss of the value of a chance is the loss of inheritance prospects arising from the death of a breadwinner.¹¹ Yet another example is compensation for uncertain promotion prospects.

[4.1.5] Desirable technique: The technique of value of a chance greatly facilitates giving effect to the ideal goal of comprehensive compensation.¹² This is particularly so within the framework of the lump-sum once-and-for-all rule. It is preferable that a plaintiff receive 10% of his loss than nothing at all. Both Van der Walt and Boberg acknowledge the desirability of the principle of value of a chance under circumstances of lump-sum once-and-for-all compensation.¹³ The methodology is well established in other jurisdictions.¹⁴

It has been said of the technique 'That is not a very satisfactory way of dealing with such difficulties, but no better way exists under our procedure'.¹⁵ Instalment compensation, we may note, would eliminate uncertainty as regards a future medical procedure but cannot bring a deceased breadwinner back to life or throw light on lost prospects of promotion.¹⁶ This point is most clear when one considers the loss of a chance in the past.¹⁷ For *lucrum cessans*¹⁸ the technique is unavoidable regardless of what procedural regime is adopted.

⁸See table of remarriage rates published 1988 *De Rebus* 67 70.

⁹For details of the calculation see 326.

¹⁰See 324 for further discussion.

¹¹*Groenewald v Snyders* 1966 3 SA 237 (A) 248E item (b). This value may be roughly calculated by estimating the inheritable estate at the end of the breadwinner's expectation of life (usually by adding inflation to the present value), discounting for interest and then applying a further discount for the chance that the wife would not have been alive to inherit. Further deductions are made for general contingencies. Actuaries use a more accurate year-by-year method (see Milburn-Pyle & Van der Linde 1974 *TASSA* 292 315 where the *spes* value is represented by A in the formula 1-A). For more detail see 330& below.

¹²See paragraph 3.3.6%.

¹³Boberg 'Delict' 477-8; Van der Walt 'Sommeskadeleer' 447 but not without heated criticism of the lump-sum once-and-for-all rule. Van der Walt glosses over the problem of uncertainty in relation to hypothetical events and tends to emphasise *damnum emergens* rather than *lucrum cessans*. *Chaplin v Hicks* [1911-13] All ER 224 (CA) is not mentioned in his case index.

¹⁴Luntz 'Damages' 2ed 82-3 91-2; Cooper-Stephenson & Saunders 'Damages in Canada' 91-102 108-10; McGregor 'Damages' 14ed 197-203.

¹⁵*Burger v UNSBIC* 1975 4 SA 72 (W) 75G.

¹⁶See, for instance, *Dusterwald v Santam Insurance* 1990 4 C&B A3-45 (C) 59 where the court ordered that allowance be made for a 50% chance of promotion.

¹⁷See, for instance, *Chaplin v Hicks* [1911-13] All ER 224 (CA) followed in *Trichardt v Van der Linde* 1916 TPD 148.

¹⁸See paragraph 3.2.7.

The recognition of value of a chance as an explicit separate technique of assessment may be viewed as a major step forward from the agglomerated 'jury'¹⁹ approach towards a more scientific approach.²⁰ It nonetheless retains its 'general-damages' character in the sense of being a substantially subjective²¹ determination based on what seems reasonable at the time of assessment.²²

[4.1.6] Probabilities and possibilities: What is in modern times described as 'probability theory' used to be known in the nineteenth century as the 'theory of chances'. The older terminology distinguished between **probabilities**, that is to say chances greater than 50% and **possibilities**, that is to say chances of less than 50%. Modern financial and statistical literature uses the word 'probability' to designate a chance in general, be it greater or less than 50%. One also encounters instances where the word 'possibility' is used merely to designate uncertainty without any intention of suggesting a chance of less than 50%.²³

The most common manifestation of the technique of value of a chance is the deduction for general contingencies.²⁴ This deduction is made from both past and future losses.²⁵ **Possible** losses, both past²⁶ and future,²⁷ are compensated in like manner with a suitably large deduction to allow for the very substantial uncertainty attaching to the loss. The technique is also appropriately described as a 'discount for risk'.²⁸ When damages are reduced for general contingencies²⁹ the defendant is being given credit for the possibility that the loss is not suffered. Even-handed justice dictates that the claimant be given credit for possible losses and vice-versa.

¹⁹The 'some-how-or-other' method (Boberg 1964 *SALJ* 194 204).

²⁰*Reid v SAR&H* 1965 2 SA 181 (D) 190H; Koch 'Damages' 2; McGregor 'Damages' 14ed 1029-30 1043-45; Munkman 'Damages' 4ed 54; Atiyah 'Accidents, Compensation & the Law' 3ed 39.

²¹If suitable statistics are available (as for remarriage or death) then the relevant chance may be determined from such statistics.

²²Savage 'Bayesian Econometrics' 112-13. That is a subjective estimate of a fair price for which the plaintiff now foregoes the right to bring an action if and when the expense actually does arise (see Buchanan 1960 *SALJ* 143 144-5; McGregor 'Damages' 14ed 176-7 190-2).

²³See too discussion of the expression *certa spes* at 76.

²⁴Boberg 'Delict' 487. The expression 'general contingencies' encompasses a wide variety of considerations other than risk (see Corbett & Buchanan 3ed 89-96). Uncertainty nonetheless remains the primary consideration (see 149 below for a more comprehensive discussion).

²⁵See table of deductions in Koch 'Damages' 334-8. There is no fundamental difference between past loss and future loss other than that some of the uncertainty has been eliminated by unfolding reality (*Sigournay v Gillbanks* 1960 2 SA 552 (A) 557inf).

²⁶*Chaplin v Hicks* [1911-13] All ER 224 (CA) followed in *Trichardt v Van der Linde* 1916 TPD 148.

²⁷*Burger v UNSBIC* 1975 4 SA 72 (W) 75D-G (emphasis supplied); approved in *Blyth v Van den Heever* 1980 1 SA 191 (A) 225-6; see too *Van Oudtshoorn v Northern Assurance* 1963 2 SA 642 (A) 650-1; *Kwele v Rondalia Assurance* 1976 4 SA 149 (W) 152-3.

²⁸*Southern Insurance v Bailey* 1984 1 SA 98 (A) 116inf 'the rate of the discount'.

²⁹*General Accident Insurance v Summers* 1987 3 SA 577 (A) 614H 'Ek veronderstel natuurlik dat daar by elke berekening behoorlik vir onsekere gebeurtenisse ('contingencies') toegelaat word'. The deduction for general contingencies is a complicated topic which covers many considerations other than pure risk (see 149 below).

It has been held that an expected future benefit from employment should be ignored because it is discretionary.³⁰ Considerations of value of a chance and comprehensive compensation suggest that the proper procedure is to allow the benefit but to make a suitable deduction for the contingency that the discretion may be adversely exercised.³¹

[4.1.7] Balance of probabilities: For a criminal conviction proof beyond a reasonable doubt is required. For a civil action it is sufficient that the facts be established on the balance of probabilities, that is the alleged fact will be accepted as proven if on the basis of the evidence before the court it seems more likely than not that the fact is correct. A decision based on the balance of probabilities reflects a judicial opinion as to the probative value of the evidence before the court. The procedure implies the existence of a past event or present state of affairs. Our human condition prevents us having knowledge of future events but **a witness may validly testify as to his beliefs concerning future events.** The state of mind of the witness as regards future events is a question of fact. Many events, such as marriage or continuing employment, are known to occur with greater or lesser likelihood. Although accurate prediction in respect of any one individual is not possible, averages³² and frequencies of occurrence for large groups can be predicted with some degree of confidence.³³ It is these perceptions of future possibilities and probabilities that form the basis of value judgments concerning the present price for which to exchange the prospect of an uncertain future financial gain or loss.³⁴

Some judges view the technique of valuation of a chance as applicable to possibilities only.³⁵ One may certainly point to recent judgments where no deduction has been made for the chance of non-occurrence of a probable loss in the future.³⁶ These judgments take the view that the loss has been proved on the balance of probabilities and may thus be accepted as a certainty. The question of a deduction for the contingency of non-occurrence is then, quite unjustifiably, ignored.³⁷

³⁰*Gehring v UNSBIC* 1983 2 SA 266 (C).

³¹*Parry v Cleaver* [1969] 1 All ER 555 (HL) 576I 'If pensions in general are to be taken into account, then such a discretion (to pay) does not take them out of account. It merely calls for some large or small or negligible discount in the value to be attached to the pension, according to whether the withholding of it is a real practical danger or (as in most cases) a mere theoretical danger'. See too *Serumela v SA Eagle Insurance* 1981 1 SA 391 (T) 392-3; *Krugell v Shield Versekeringsmpy* 1982 4 SA 95 (T) 102-4.

³²Such as the average expectation of life used so extensively for damages calculations.

³³See section 5.6.

³⁴See 15.

³⁵See paragraph 4.1.6.

³⁶*Fortuin v Commercial Union Assurance* 1983 2 SA 444 (C) and comments by Davel 'Broodwinner' 416n85; *Modern Engineering Works v Jacobs* 1949 3 SA 191 (T); *Pallas v Lesotho National Insurance* 1987 3 C&B 705 (ECD) 713; *Hotson v East Berkshire Area Health Authority* [1987] 2 All ER 909 (HL) and comments by Fleming 'Probabilistic causation in tort law' 1989 *CBR* 661 672-5. Van der Walt 'Sommeskadeleer' 274-6 would seem to advocate this approach to future loss.

³⁷In general the courts will make a deduction for the contingencies attaching to expected expenditure: *Kriel v Administrator-General, SWA* 1986 3 C&B 539 (SWA) 551inf (25%); *Ncubu v NEG Insurance* 1988 2 SA 190 (N) 198B (15%).

[4.1.8] *Certa spes*: The expression '*certa spes*' highlights the potential ambiguity in dealing with value of a chance and proof on the balance of probabilities. Voet³⁸ states that the chance (*spes*) for which compensation is to be awarded must be neither too speculative (*nimis incertum*) nor too remote in time (*nimis longe*) but must nonetheless be established on the balance of probabilities (*certa*). The chance itself may be small, perhaps 5% or 10%, but nonetheless substantial. A *certa spes* is a *spes* which is more than just a figment of the imagination, a flight of fancy pressed to extinction by the weight of accumulated contingencies.³⁹ Buchanan⁴⁰ has pointed out that the word 'likelihood' does not necessarily denote a probability. It can be used to denote any reasonably foreseeable possibility,⁴¹ that is to say a *certa spes*.

[4.2] APPORTIONMENT OF DAMAGES

The technique of value of a chance is not the only instance where one finds a scaling down of the liability of the defendant. Liability for the damages will be apportioned between the wrongdoer and the victim.⁴² A similar apportionment of liability has been adopted between multiple contingent wrongdoers.⁴³

The similarity between an apportionment of damages and the technique of value of a chance is unmistakable. Both involve a scaling down of the liability for damages. One may speak of the 'degree of causation' in relation to an uncertain future event.⁴⁴ Natural phenomena such as early death or economic adversity may be viewed as part causes of loss of earnings or support and then dealt with by a percentage deduction from the total possible damage. The need for medical costs may be terminated by the early death of the victim with a consequent reduction in the damage suffered.⁴⁵ Apart from natural phenomena a victim has a duty of care in the sense that he is required to mitigate his damages. In suitable circumstances his own conduct subsequent to the injury may be viewed as the cause of part or all of his own losses.⁴⁶ Other events such as medical negligence or assault may serve to compound the

³⁸ *Dummodo lucri affulserit certa spes; nam si illud vel incertum nimis, vel nimis longe petitur, eius habenda ratio non est* (Voet *Ad Pandectas* 45.1.9). Erasmus 1975 *THRHR* 268 269 states in this regard that 'The expectation of profits must, however, have been certain to render the defendant liable for the loss'. I assume that by 'expectation of profits' Erasmus means 'value of a chance'.

³⁹ Reinecke 1976 *TSAR* 26 31 'Bewys sal gelewer moet word dat die vervulling van die vermoënsverwagting voor die plaasvind van die gewraakte gebeurtenis so waarskynlik was dat dit redelikerwys 'n geldelike waarde vir die betrokke persoon gehad het'; see too Savage 'Bayesian Econometrics' 114-15. Actuaries used to be trained to place a value for purposes of sale on inheritance prospects (Benz & Tappenden 'Valuation of reversions and life interests').

⁴⁰ Buchanan 1960 *SALJ* 187 190n14.

⁴¹ *Joffe & Co Ltd v Hoskins* 1941 AD 431 451; *Bristol Laboratories Inc v Ciba Ltd* 1960 1 SA 864 (A) 873sup. Buchanan points out that Clerk & Lindsell *Torts* 12ed 395 para 643 use the phrases 'likely to occur' and 'may occur' as synonymous. See too *Carstens v Southern Insurance* 1985 3 SA 1010 (C) 1024E/F where the court uses the word 'probability' in the statisticians' sense of a chance greater or less than 50%.

⁴² Apportionment of Damages Act 34 of 1956.

⁴³ Fleming 'Probabilistic causation in tort law' 1989 *CBR* 661 664-9.

⁴⁴ Fleming 'Probabilistic causation in tort law' 1989 *CBR* 661 discusses the allocation of liability for partial causation.

⁴⁵ Reinecke 1976 *TSAR* 26 34inf.

⁴⁶ See, for instance, *Mafesa v Parity Versekeringsmpy* 1968 2 SA 603 (O). *S v Mokgethi* 1990 1 SA 32 (A) was concerned with a criminal charge of murder where the victim's own negligence had accelerated the onset of death.

damage suffered and introduce further wrongdoers liable for part of the loss suffered.⁴⁷

It has been said by the appellate division that there is a close relationship between causation and the technique of value of a chance.⁴⁸ The considerations giving rise to this observation are by no means clear but one may surmise that they were concerned with scaled down or apportioned liability. One may note that judicial causation is concerned with the limitation of damages.⁴⁹

Although the technique of value of a chance may involve the scaling down of damages in proportion to the chance of occurrence, it also involves the award of damages for possibilities, items of loss which would be disallowed if regard were had solely to probabilities in the sense of chances greater than 50%. In this sense the technique of value of a chance is not a form of limitation of liability, as is generally the function of legal causation, but rather a procedural technique that enables the court to effect the most comprehensive possible compensation.⁵⁰

[4.3] ILLUSTRATIVE EXAMPLES

[4.3.1] A finding of fact: A medical expert may testify that according to his experience one hip operation in ten will require a major revision within three years and that the plaintiff is faced with the risk of substantial expenditure. Another medical expert may testify that all hip operations are good for 15 years. The court is then required to make a finding on the credibility of these witnesses. This finding will be based upon the balance of probabilities. The court may find that there is a 10% chance of an expensive revision operation within 3 years. This then becomes an accepted fact to be applied when assessing compensation. The claimant will be awarded 10% of the cost of the operation.

[4.3.2] A choice of alternatives: It is clear that if the need for a revision operation arises the plaintiff will have far too little money. If the need does not arise the plaintiff will have gained. It is situations of this nature which provoke agitation for instalment compensation. In practice the plaintiff would probably have been offered a 'provincial hospital certificate'⁵¹ but refused to accept it by reason of the excessive

⁴⁷*Bekker v Constantia Insurance* 1983 1 PH J13 (E); *Minister of Communications & Public Works v Renown Food Products* 1988 4 SA 151 (C); Cooper-Stephenson & Saunders 'Damages in Canada' 626-635; Hart & Honoré 'Causation' 247n3&4. Neethling Potgieter & Visser 'Deliktereg' 2ed 189 'n gebeurtenis net as *actus novus interveniens* sal kwalifiseer as die gebeurtenis *nie redelikerwys voorsienbaar was nie*'.

⁴⁸*Blyth v Van den Heever* 1980 1 SA 191 (A) 226A '...it is not always possible to distinguish clearly between causation and quantification in this sphere'. Reinecke 1976 *TSAR* 26 39 'Die skadebegrip is dus weliswaar gevolgsomskryf maar die suiwer skademaatstaf behoort neutraal teenoor kousaliteitsmaatstawwe te staan'.

⁴⁹'Wat juridiese kousaliteit betref, beklemtoon hy tereg dat dit nie hier in werklikheid oor kousaliteit gaan nie, maar oor aanspreeklikheidsbegrensing of toerekenbaarheid van skade...' Neethling & Potgieter 1993 *THRHR* 157 158.

⁵⁰See 50.

⁵¹Purportedly in terms of article 43 of MMF agreement ito Act 93 of 1989. Such a 'certificate' entitles the holder to free treatment at a provincial hospital. *Maja v SA Eagle Insurance* 1987 4 C&B B2-1 (W) held that a claimant is not obliged to accept such a certificate guaranteeing free treatment at a state hospital. *Munro v NEG Insurance* 1988 4 C&B F2-1 (D) ruled that the proposed undertaking was not as intended by the relevant Act and thus the court could not make it an order of court.

delays with admission to a state institution. We see here utility in action. The plaintiff can choose between having all costs covered but with inconvenient delays, or receive 10% of the required money with a 100% assurance that the funds can be applied immediately to buying, for example, a new hi-fi set.⁵² The plaintiff and his advisors may well be very happy with an award of 10% of the cost of the operation, even if idealists are not. In general it seems that plaintiffs prefer lump sums to instalments.⁵³ This preference is probably shared by legal advisors who usually need to look to their client for payment of those legal costs which the defendant does not pay.⁵⁴

[4.4] CONCLUSIONS

The damages to be awarded for an uncertain past or future loss will be discounted having regard to the chance that the loss will occur, or would have occurred. This discount applies to chances both greater and less than 50%. By reason of the discount the award cannot be used to cover an actual future expense, or loss of earnings or support, when the time comes. The value calculated using the technique of value of a chance is the present utility of the prospective loss. Restitution is only effected in the abstract sense of topping up the present utility of the victim's life plan.

⁵²It is for this reason that the present value discounted for risk is termed a 'substitution rate' (Savage 'Bayesian Econometrics' 112-13).

⁵³Pearson Cmnd 7054 1978 vol 1 155 para 716; Luntz 'Damages' 2ed 26. See quotation at 42 above.

⁵⁴These are, it seems, often quite substantial. Future research as regards instalment compensation would do well to address the problems created by legal costs recoverable from the claimant (see, for instance, *Hughes v Santam Insurance* 1988 (W) (unreported 29.9.88 case 20704/86)).