PROBABILITY AND THE PROUDMAN v. DAYMAN DEFENCE OF REASONABLE MISTAKEN BELIEF

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[*The judgment of Sir Owen Dixon in Proudman v. Dayman established 'reasonable mistake of fact' as a defence for persons charged with regulatory offences. Reviewing both case law and philosophical theory Mr Fisse probes the relevance of probability under this defence.*]

What is the relevance of degrees of probability under the *Proudman v. Dayman*[1] defence? At present, the common law appears to have enshrouded this question in a wrap of 'reasonable mistaken belief'. Curiosity may well increase; in a regulated world, there is cause for inquiring just how probability is supposed to guide our lives.

Maher v. Musson[2] illustrates the nature of our enquiry. The cheap price paid for a quantity of spirits by D, a chemist charged with being in custody of illicit spirits, made the case one in which some account of the significance of degrees of probability would have been appropriate. Yet the High Court was content to ask whether D had 'any reason to suspect' or 'reason to believe'[3] that the spirits were illicit. These umbrella formulae shadow underlying questions of no minor significance to an adequate theory of fault. What is a 'reason to suspect' or a 'reason to believe'?[4] To ask D, as did the court of summary jurisdiction, 'Did you suspect that the spirits were illicit?'[5], may leave D to resolve the ambiguity of 'suspect' in his favour. Proper *indicia* of fault are placed in issue only if more particular questions are asked. This seems evident from speculating as to the result in *Maher v. Musson*[6] if, in response to D's query, 'Are these spirits all right?', the chemist supplying them had said:

> [h]ow do I know? Whether or not spirits are illicit depends upon all sorts of events which could have happened without my knowledge. I bought the spirits from a reputable wholesaler, but as you know, there is a lot of white collar crime in the chemicals industry, even in the best companies. If you ask them, all they will ever say is that of course the spirits are licit,

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1 (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

2 (1934) 52 C.L.R. 100.

3 *Ibid.* 104, 109. Compare the criticism of 'on the cards' in *Koufos v. C. Czarnikow Ltd (The Heron II)* [1969] 1 A.C. 350, 415; [1967] 3 All E.R. 686, 711 (*per* Lord Pearce).

4 (1934) 52 C.L.R. 100, 104, 109 (*per* Dixon J., and Evatt and McTiernan JJ.).

5 *Ibid.* 100.

6 (1934) 52 C.L.R. 100.

and that the lower price merely reflects the benefits of large scale production and increased competition.

Is D responsible on the basis of some rule that the existence of the prohibited event or situation must not be reasonably *possible*? Must the prohibited event or situation be reasonably *probable*? Should fault be governed by what may be called a meticulous model of reasonable belief? Under such a model D would need to believe in the non-existence of the prohibited event or situation (p) with a degree of confidence corresponding to an objective degree of probability that p, the requisite degree of objective probability being determined according to the utility of, or social tolerance relating to, D's behaviour. What are the precise connections between fault and degrees of probability?

The following discussion is concerned with, first, the existing law; second, the theoretical and practical difficulties facing the assessment of probability according to a meticulous model of reasonable belief; third, an alternative approach stressing rules of action rather than probability estimates; and fourth, some parting comments upon the extent to which the concepts of mistake and belief might have legally relevant interactions with the issue of probability.

I EXISTING LAW

Although the case-law upon the *Proudman v. Dayman*[7] defence has yet to confront the issue of probability squarely, several possible implications require consideration. Before these are taken up, it is convenient to outline recent judicial treatments of probability in recklessness.

(a) RECKLESSNESS AND DEGREES OF PROBABILITY

Degrees of probability have occasioned judicial comment in the context of recklessness, and it could be thought appropriate under the *Proudman v. Dayman*[8] defence to adopt a similar approach. Unfortunately, the cases upon recklessness, although instructive, offer no simple solutions. Four recent cases of note are *R. v. Hallett*,[9] *R. v. Daly*,[10] *R. v. Flannery*,[11] and *R. v. Bingham*.[12]

In *R. v. Hallett*,[13] a decision arising on appeal against a murder conviction, the South Australian Court of Criminal Appeal took recklessness to require foresight that the prohibited event was 'likely' or 'probable', two words regarded as equivalent, and meaning 'no more than a more

[7] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[8] *Ibid.*
[9] [1969] S.A.S.R. 141.
[10] [1968] V.R. 257. See also *R. v. Cunningham* [1957] 2 Q.B. 396; [1957] 2 All E.R. 412.
[11] [1969] V.R. 31.
[12] [1973] 2 All E.R. 89.
[13] [1969] S.A.S.R. 141.

than fifty per cent chance of the event happening'.[14] As a general test of degrees of probability in recklessness this approach attracts the criticism that it is too lenient in some situations, as where D, in a variation upon Russian roulette, takes a 1 in 6 chance and kills V. Nonetheless, limiting the scope of recklessness by a requirement of likelihood or probability has attracted a good measure of judicial support.

By contrast, the Victorian rape cases of *R. v. Daly*[15] and *R. v. Flannery*[16] contain the suggestion that D will not have a defence of mistaken belief where he believes it possible, although unlikely, that V's consent has not been given. This suggestion, which does not appear to fall within the rubric of wilful blindness, should not be taken as indicating any general proposition that foresight of possibility suffices for recklessness,[17] but rather as a tentative, and perhaps questionable, assessment that in the particular setting of such sexual encounters, the social tolerance relating to D's behaviour is so low that not even slight risks are justifiable. This interpretation is in accord with reform proposals to the effect that the relevant degree of risk in recklessness should vary from situation to situation without any such limitation as that imposed in *R. v. Hallett.*[18]

A more instructive case on the score of probability and possibility in recklessness is *R. v. Bingham,*[19] decided in 1973 by the English Court of Appeal. D approached the Russian Embassy with a view to payment for information to be supplied by her husband, a lieutenant in the navy. She contended that she believed and intended that her control over her husband would be such that the information would be innocuous, the purpose of this confidence trick being the relief of financial embarrassment. D was charged with doing an act preparatory to the commission of an offence against the Official Secrets Act 1911 (U.K.) contrary to section 7 of the Official Secrets Act 1920 (U.K.). Was the mental element of this offence

[14] *Ibid.* 153. An argument that possibility is sufficient was rejected. See further, Williams, *Criminal Law: The General Part* (2nd ed. 1961) 59-64; Andenaes, *The General Part of the Criminal Law of Norway* (1965) 206, 211-12; and compare *Overseas Tankship (U.K.) Ltd v. The Miller Steamship Co. Pty Ltd (The Wagon Mound (No. 2))* [1967] 1 A.C. 617, 634-5; [1966] 2 All E.R. 709, 713 (*per* Lord Reid).

[15] [1968] V.R. 257.

[16] [1969] V.R. 31.

[17] But see *Pemble v. The Queen* (1971) 124 C.L.R. 107, 119-21; [1971] A.L.R. 762, 770-2 (*per* Barwick C.J.); *Reynhoudt v. The Queen* (1962) 107 C.L.R. 381, 389; [1962] A.L.R. 483, 486-7 (*per* Kitto J.). Consider also U.S. National Commission on Reform of Federal Criminal Laws, *Working Papers* (1970) I, 139 (mistake of law — 'reasonably and firmly, without substantial doubt').

Note that frequently found references to D being asked 'Were you quite sure?' are usually explicable as an attempt to ascertain whether the evidence or grounds relied upon by D were such that he should not have acted. Consider *Kidd v. Reeves* [1972] V.R. 563.

[18] [1969] S.A.S.R. 141. See The Law Commission, *Codification of the Criminal Law: General Principles: The Mental Element in Crime* (1970) Published Working Paper No. 31, 48-9. Compare the position in the tort of negligence: Atiyah, *Accidents, Compensation and the Law* (1970) 104-8.

[19] [1973] 2 All E.R. 89.

satisfied by foresight of the possibility (as opposed to probability) that the transmission of prejudicial information would follow? D's conviction followed a direction that it was, a conclusion endorsed on appeal. The Court of Appeal reasoned that the statute contemplated acts which could be entirely in the future and even more remote from the substantive offence than attempts, and that, since 'no one [could] be a prophet in this regard',[20] requiring foresight of probability would narrow the scope of the offence too much.

Although the sufficiency of foresight of possibility in a case such as *R. v. Bingham*[21] may appeal to those who believe that such masterminds should be given no quarter, the reasoning of the Court of Appeal leaves much to be desired. First, it seems unsatisfactory to say, as the Court might be taken to imply, that foresight of possibility will always suffice for the preparatory act offence. Consider hypothetical situations where Mrs Bingham merely reaches stages of preparation far more remote than that in the actual case. To punish on the basis of such acts of preparation committed with only foresight of possibility comes perilously close to punishing mere thoughts and allows insufficient scope for a change of heart. A better approach might be to require different degrees of probability according to the degree of preparation.[22] Thus, in some situations, as perhaps in *R. v. Bingham,*[23] actual intention or foresight of certainty (as in attempt)[24] might suffice, whereas conduct on the verge of obtaining vital defence information could attract responsibility on the basis of foresight of probability.

A second criticism stems from the alleged difficulty of predicting future events. It would be specious to contend that such a difficulty should of itself lead to a downgrading of the requisite degree of probability. Predicting what is going to happen in the future may well be difficult in many instances, but frequently it is also difficult to ascertain past or present facts.[25] If foresight of possibility is to suffice then the justification should be founded on the distinct basis that the nature of the risk does not warrant the taking of even slight chances. Perhaps the Court of Appeal was proceeding along these lines, but its reasoning is ambiguous.

A third comment is that it is not necessarily the case that temporal distance increases the difficulty of saying that future events are probable.

[20] *Ibid.* 92 (*per* Lord Widgery C.J.).
[21] [1973] 2 All E.R. 89.
[22] See text to n. 18.
[23] [1973] 2 All E.R. 89.
[24] It is not a matter of universal satisfaction that in *R. v. Bingham* [1973] 2 All E.R. 89, the Court of Appeal devoted little attention to the heavy penalties possible, the width of 'act of preparation', or the further point that other forms of responsibility covered by the same statutory provision (*e.g.* attempt, complicity) require intention or foresight of certainty (even if recklessness suffices for complicity is possibility sufficient?).
[25] See Tribe, 'Trial by Mathematics: Precision and Ritual in the Legal Process' (1971) 84 *Harvard Law Review* 1329, 1345-6.

Assessments of the probability of future events are typically made without reference to any limited time span. This being so, it can well be the case that the longer the time span in question the greater the probability that a relevant event will occur. Prophecies often come to pass if the time limits are kept vague or wide. Consider the facts in *R. v. Bingham*[26] objectively. Mrs Bingham's action in putting the Russians in touch with her husband, and creating a potential blackmail situation by even approaching them in the manner she did, made it probable that eventually the husband would supply prejudicial information. Mrs Bingham may have appreciated this herself, and perhaps the Court of Appeal had in mind such a long term consideration when stating 'one can hardly think of a case in which the probability of prejudice was stronger than in this case'.[27]

(b) DEGREES OF PROBABILITY AND REASONABLE MISTAKEN BELIEF

Against the above background we may now consider possible implications of the case-law directly concerned with the *Proudman v. Dayman*[28] defence. Four questions seem central. First, is the case-law consistent with a general rule that D will be responsible if his belief involves the reasonably possible existence of the prohibited situation? In other words, must D reasonably believe, in all cases, that *p* is highly probable or almost certain? Second, what support is there discernible for a rule, corresponding to that in *R. v. Hallett,*[29] that D must believe *p* in circumstances where the existence of the prohibited situation is not reasonably likely or probable (in the sense of a greater than fifty per cent chance)? Third, is the *Proudman v. Dayman*[30] defence a dead letter in many regulatory contexts, given that in organizational settings and elsewhere it will often be probable, or even certain, that over a period of time the prohibited situation will occur? Fourth, can the cases be explained in terms of a meticulous model of reasonable belief?

(i) POSSIBILITY

One writer has raised the question whether the *Proudman v. Dayman*[31] defence is available in situations where D reasonably believes only that *p* is probable, as in situations where D has not examined the particular object (perhaps an undersize crayfish) giving rise to prosecution.[32] The answer, it may be argued, is yes, provided it is reasonable for D to take

[26] [1973] 2 All E.R. 89.
[27] *Ibid.* 92 (*per* Lord Widgery C.J.).
[28] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[29] [1969] S.A.S.R. 141.
[30] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[31] *Ibid.*
[32] Rose, 'Vicarious Liability in Statutory Offences' (1971) 45 *Australian Law Journal* 252, 256. See also Rose, 'Vicarious Liability in Regulatory Offences' (1970) 44 *Australian Law Journal* 147, 151-2.

the particular risk. That there should be no general rule precluding the defence where D's belief entails the reasonably possible existence of the prohibited situation can be supported by reference to *R. v. Tolson*,[33] *Maher v. Musson*,[34] *Geraldton Fishermen's Co-operative Ltd v. Munro*,[35] and *Munro v. Lombardo*.[36]

The general rule postulated would seem inconsistent with *R. v. Tolson*[37] and *Maher v. Musson*.[38] Mrs Tolson's reasonable mistaken belief was based upon information from Mr Tolson's older brother and general report to the effect that Mr Tolson had perished in a vessel, bound for America, which went down with all hands on board. She had no direct evidence of her husband's death; it was possible that he was still alive. As regards *Maher v. Musson*[39] it may well be asked what degree of probability lay in D's belief that the spirits were not illicit. Since the licit or illicit character of the spirits was beyond D's perception and rested upon the testimony of others, it was also quite possible that the spirits were illicit. If it be replied that in both of these cases there was no reasonable possibility of the prohibited situation existing, in the sense that it was reasonable in those circumstances for D to take the risk, we clearly have an argument based upon consideration of reasonable behaviour which, in appropriate circumstances, could also be used to support the sufficiency of a reasonable belief that *p* (the non-existence of the prohibited situation) is only *probable*, or, less restrictively, a belief that *p*, where the existence of the prohibited situation is not reasonably probable.

However, two cases from Western Australia, *Geraldton Fishermen's Co-operative Ltd v. Munro*[40] and *Munro v. Lombardo*,[41] could be taken to support a general rule denying the sufficiency of either a reasonable belief that *p* is probable, or a belief that *p*, where the existence of the prohibited situation is improbable. In *Geraldton Fishermen's Co-operative Ltd v. Munro*,[42] a decision of the Full Court of the Supreme Court of Western Australia, D was convicted on a charge of having in its control underweight crayfish tails. Relying upon section 24 of the Criminal Code, D pleaded that, through its general manager, it had entertained a reasonable mistaken belief that all crayfish tails in its control were overweight. On appeal it was held that D did not have a valid defence under section 24. First, although D had asserted a reasonable belief that three-inch crayfish (*i.e.* of legal size) would not produce tails of less than five ounces in weight there was no admissible evidence to the effect that such a belief

[33] (1889) 23 Q.B.D. 168.
[34] (1934) 52 C.L.R. 100.
[35] [1963] W.A.R. 129. Compare *R. v. Pierce Fisheries Ltd* (1970) 5 C.C.C. 193.
[36] [1964] W.A.R. 63.
[37] (1889) 23 Q.B.D. 168.
[38] (1934) 52 C.L.R. 100.
[39] *Ibid.*
[40] [1963] W.A.R. 129.
[41] [1964] W.A.R. 63.
[42] [1963] W.A.R. 129.

was mistaken, and unless there was a mistaken belief, section 24 did not apply. Second, an alternative or additional ground for the decision was that even if the belief above was a mistaken one, such a belief was not inconsistent with the hypothesis that crayfish under three inches in length could come under D's control and on the evidence any belief that no underweight crayfish tails were passing through D's checking system would have been 'utterly unreasonable'[43]: that system was by no means likely to detect every underweight tail.

Does the second ground in *Geraldton*[44] support a general requirement under the *Proudman v. Dayman*[45] defence (or a statutory counterpart) of certainty or high probability in belief? It would seem not. In *Geraldton*[46] D could not reasonably believe, at any relevant point of time, that probably *p* (not being in control of an underweight crayfish tail). Quite possibly there may have been even a reasonable probability (or, indeed, higher risk) that one or more of say a batch of 1000 tails was underweight. By contrast, if D had contemplated a normal box of 20 packed tails then it could reasonably be believed that the box of 20 was most unlikely to contain any underweight tails. In that event, assuming all other tails had been dispatched from D's premises, D could well be exculpated on the basis of a reasonable belief that being in control of underweight tails was a most unlikely situation.

The main lesson to be derived from the *Geraldton*[47] case, it may be suggested, is that the operation of the *Proudman v. Dayman*[48] defence is severely limited in some commercial settings. If the relevant offence is one which, at a particular point of time, typically involves numerous items such as crayfish tails, then if D is distant from the individual items; a problem of minimal violation arises:[49] if D should appreciate that at any one point of time a small number of items will involve violation, a *Proudman v. Dayman*[50] defence is stopped by the barrier of innocence. Unless there exists some defence involving exemption for minimal violation, a possibility mentioned in the concluding section, D may be exposed to an unreasonable risk of conviction.

Munro v. Lombardo[51] was another crayfish case decided by the Full Court of the Supreme Court of Western Australia. D, the master of a crayfish vessel, was charged with being in control of female crayfish having eggs or sperm attached beneath the body, contrary to section 24(3) (a) of the Fisheries Act 1905-1965 (W.A.). He had been acquitted, not-

[43] *Ibid.* 136.
[44] [1963] W.A.R. 129.
[45] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[46] [1963] W.A.R. 129.
[47] *Ibid.*
[48] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[49] See *e.g.* [*Pearce v. Paskov*] 1968 W.A.R. 66; *Dean Rubber Manufacturing Co. v. U.S.* (1966) 356 F. 2d 161.
[50] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[51] [1964] W.A.R. 63.

withstanding unsatisfactory evidence concerning an essential question under section 24 of the Criminal Code: did he reasonably believe that no prohibited crayfish were in his control? On appeal, it was held by the Full Court that a defence under section 24 had not been made out since D plainly should have realized that some prohibited crayfish were in his possession. In this respect the case closely follows the second ground given in *Geraldton*,[52] as examined above. However, both Wolff C.J. and Virtue J., it may be thought, went further in their reasoning. For Wolff C.J., D was under a duty, as skipper of the vessel, to examine the catch.[53] By contrast, Virtue J. did not explicitly state that such a duty existed, but, in assessing the evidence, commented: '[the evidence] does not assert that [D] was necessarily present all the time and participating in the sorting out process so as to be in a position to conclude that all spawners had been thrown out as the normal procedure required. In fact the evidence for the defence generally indicated that there would be times when he was not so present or in a position to see what was going on and whether spawners were being thrown back or how they were being treated.'[54]

The above views of Wolff C.J. and Virtue J. should not be regarded as postulating any general requirement that D make a personal inspection, or that his belief involve certainty or a high degree of probability. First, any possible duty to conduct a personal inspection should be seen to arise only in situations where, as perhaps in *Munro v. Lombardo*,[55] it may well be reasonable to insist upon such inspection. Any wider view would be out of line with the implications of *R. v. Tolson*,[56] and *Maher v. Musson*.[57] Second, Virtue J.'s comments need not be taken to imply a requirement of certainty or even high probability in belief. One interpretation is that His Honour was directing his mind primarily to the question of innocence (compare *Geraldton*[58]): could D reasonably believe that *no* prohibited crayfish were in his control? Another is that crayfish are of such significance in Western Australia, that, in this particular context, fishermen cannot reasonably take even very slight risks. Whatever interpretation be advanced, account should again be taken of *R. v. Tolson*[59] and *Maher v. Musson*.[60]

[52] [1963] W.A.R. 129.
[53] [1964] W.A.R. 63, 66. A statutory duty, or one arising from his employment? Presumably the former, in which event contrast the different result in another inspection case, *State v. Williams* (1952) 115 N.E. 2d 36. Consider also *The Lady Gwendolen* [1965] P. 294, 312; [1965] 2 All E.R. 283 (the proper use of fog was considered of such importance as to merit the personal attention of the owners); *Thomas v. The Queen* (1937) 59 C.L.R. 279, 317-18 (*per* Evatt J.).
[54] [1964] W.A.R. 63, 72.
[55] [1964] W.A.R. 63.
[56] (1889) 23 Q.B.D. 168.
[57] (1934) 52 C.L.R. 100.
[58] [1963] W.A.R. 129.
[59] (1889) 23 Q.B.D. 168.
[60] (1934) 52 C.L.R. 100. Contrast the possible implications of *Samuels v. Centofanti* [1967] S.A.S.R. 251, as seen in Rose, 'Vicarious Liability in Regulatory Offences' (1970) 44 *Australian Law Journal* 147, 152-3.

(ii) Probability

The view in *R. v. Hallett*[61] that recklessness requires foresight of likelihood or probability (meaning a greater than fifty per cent chance) could lead to a rule that the *Proudman v. Dayman*[62] defence requires a belief that *p* (the non-existence of the prohibited situation), the prohibited situation not being reasonably likely or probable. Such a parallel would be consistent with *R. v. Tolson*[63] and *Maher v. Musson.*[64] However, a strong contrary trace seems evident from the relevance of possibility to the reasoning in *Munro v. Lombardo,*[65] and the consequential worry that a general rule based on likelihood or probability would be too lenient in some situations. This objection is persuasive, and might be strengthened by the argument that recklessness typically applies to offences where the adverse results of a conviction justify a requirement that D disregard a considerable degree of risk.

(iii) Probability and Temporal Distance

As indicated in a prior comment upon *R. v. Bingham,*[66] temporal distance may well mean that the prohibited event or situation is probable. This effect of temporal distance might be thought to explain in part the absence of judicial enquiries into degrees of probability: what is the point of pleading a defence of reasonable mistaken belief in those many situations where, as an inevitable consequence of organizational or other planned behaviour, D cannot reasonably believe over a span of time that the prohibited situation will not occur? However, whatever the position in the past, such a severe restriction upon the scope of the defence is now at odds with views expressed in *Mayer v. Marchant,*[67] an important recent decision of the Full Court of the Supreme Court of South Australia.

In *Mayer v. Marchant,*[68] D was charged, in essence, with being the owner of an overloaded vehicle contrary to sections 144 and 146 of the Road Traffic Act (S.A.). His tanker, which carried a load of distillate, was found overloaded to the extent of 1 ton. The tanker had been loaded and driven by an employee, X. The explanation for the excess weight was accepted as being an unusually high density in the distillate supplied by the oil company. Both D and X were unaware of this increase in density and had no reason to suspect it. The precautions initiated by D to avoid overweight loads of distillate consisted of weighbridge checks with gallonages of different samples of distillate. These checks, which took place

[61] [1969] S.A.S.R. 141.
[62] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[63] (1889) 23 Q.B.D. 168.
[64] (1934) 52 C.L.R. 100.
[65] [1964] W.A.R. 63.
[66] [1973] 2 All E.R. 89.
[67] (1973) 5 S.A.S.R. 567.
[68] *Ibid.*

some eighteen months previously, indicated that 6400 gallons of distillate would produce weights at or near the statutory limit, and not more than 2 or 3 hundredweight in excess. That degree of excess was regarded as acceptable by the weighbridge officers in attendance at D's checks. Subsequently, both D and X proceeded to use the figure of 6400 gallons as an appropriate limit. On the occasion giving rise to the charge D had not directed his mind to the question of overweight. As regards variations in density, it was conceded by D that it would have been possible to carry out checks for each particular load but this had not been done. The Magistrate acquitted D on the basis of a defence of reasonable ignorance of fact (as opposed to reasonable mistaken belief), reliance being placed upon the observations about *Maher v. Musson*[69] made by Bray C.J. in *Kain and Shelton Pty Ltd v. McDonald.*[70] The prosecution appealed to the Supreme Court, the case then being referred to the Full Court.

A majority of the Full Court agreed with the Magistrate's conclusion that D should be acquitted, but for a different reason. Bray C.J. and Zelling J. held that the appropriate defence was that of act of a stranger (known commonly in South Australia as the *Snell v. Ryan*[71] defence), the relevant act of a stranger being the unexpected supply of unusually dense distillate by the oil company. The third member of the Court, Hogarth J., dissented on this point; the supply of the distillate was not to be seen as involving the unauthorized act of a stranger within the scope of the defence.

As regards the *Proudman v. Dayman*[72] defence, or a possible defence of reasonable ignorance, the requirement of innocence was not satisfied. D had realized that his tanker could be perhaps two or three hundredweight over the statutory limit, and that limit could not be waived by the approval of the weighbridge operators. However, all three members of the Court discussed the sufficiency of a general conscious belief covering a range of particular instances. Would it have mattered in the present case that D had not directed his mind to the particular load in question, provided that his earlier conscious belief about the weight of loads of distillate carried on his tanker was both reasonable and innocent? The answer given was emphatically no.

For Bray C.J. it was sufficient for there to be:

> a general belief in a general proposition covering the relevant circumstances, such as that a certain number of gallons of distillate loaded on to a vehicle of a certain type will produce a load of a certain weight, [and] it is not necessary that there should be conscious advertence to each practical appli-

[69] (1934) 52 C.L.R. 100.
[70] (1971) 1 S.A.S.R. 39; 45 (*per* Bray C.J.).
[71] *Snell v. Ryan* [1951] S.A.S.R. 59. See also *Norcock v. Bowey* [1966] S.A.S.R. 250.
[72] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

> cation of that proposition, such as that a particular vehicle on a particular day at a particular stage of its journey carried a particular load.[73]

Zelling J., by contrast, treated the situation as one involving a presumption of continuance:

> [D] had already applied his mind to the question of the weight of a load of 6,400 gallons of distillate and there was nothing in this load which rendered any new application of mental processes necessary in this particular case.[74]

A different formulation again was given by Hogarth J.:

> a defendant who wishes to rely on this defence is not required to advert particularly to the circumstances each time a recurring act occurs. If he applies his mind on one occasion, and then forms the honest and reasonable belief that he is not in breach of the law so long as the same set of circumstances is repeated, then I think that he is only required to establish a belief that in the particular instance . . . , he honestly and reasonably believed those circumstances were being repeated. Thus, if several years ago [D] had honestly and reasonably formed a belief that a particular gallonage loaded onto his tanker would not result in the vehicle exceeding the legal limit, then in any case where he permitted the vehicle to be on a road only when it was so loaded, this would be sufficient to bring him within the defence.[75]

These observations are important because, in addition to whittling away the practical significance of any requirement of conscious belief under the *Proudman v. Dayman*[76] defence, they materially affect probability in situations involving temporal distance. As the facts in *Mayer v. Marchant*[77] suggest, D may consider the chances of being the owner of an overweight tanker over a period of months or years. Even if he takes extensive precautions relating to staff instruction, density of fuel, and so on, it may still be the case that, over such a time span, it is likely (or perhaps even certain) that on some occasion someone will slip up. If the *Proudman v. Dayman*[78] defence requires a reasonable belief that D will not be the owner of an overweight vehicle over the period covered by D's advertence to the question, accused will fall victim to the effect of temporal distance. By contrast, if D's reasonable conscious belief about one event in a similar series is taken to maintain its exculpatory value throughout the series, this effect of temporal distance will be avoided: provided the one situation taken as being typical of the series does not itself involve an excessive risk of violation, D will be acquitted. This approach to temporal

[73] (1973) 5 S.A.S.R. 567, 570.
[74] (1973) 5 S.A.S.R. 567, 588.
[75] (1973) 5 S.A.S.R. 567, 576. This approach of Hogarth J. may require more of D than Bray C.J. and Zelling J. thought appropriate: for Hogarth J., what is required by way of a *belief* about the particular instance, and what is the import of the concluding reference to *permitting* a vehicle to be loaded in a particular way?
[76] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[77] (1973) 5 S.A.S.R. 567.
[78] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

distance, it may be noted, squares with the position in the case of subconscious assumptions or ignorance, should these be covered by the *Proudman v. Dayman*[79] defence or a distinct defence of reasonable ignorance: both of these states of mind are referable to any particular point of time.[80]

On the basis of the above views in *Mayer v. Marchant*[81] D may thus obtain an acquittal provided he is astute enough to entertain a reasonable belief in relation to a specific example of a generality of events; periodic stops can enable the *Proudman v. Dayman*[82] defence to run over temporal distance.

(iv) METICULOUS MODEL OF REASONABLE BELIEF

As far as the present discussion has gone, we are left with two unsatisfactory possible approaches to degrees of probability, and an assumption that such degrees are of practical importance to the *Proudman v. Dayman*[83] defence. Does a meticulous model of reasonable belief, as previously outlined, provide the basis for a workable interpretation of the case-law? Certainly the idea of determining relevant degrees of probability according to the type of risk involved in each particular case would be consistent with the treatment of possibility in *Munro v. Lombardo*,[84] and would avoid the inflexibility of general rules requiring that there be no reasonable possibility of the prohibited situation occurring, or, as suggested by *R. v. Hallett*,[85] no reasonable probability. Yet, as the silence of the courts would suggest, this approach is vitiated by the difficulty of assessing degrees of probability, a matter examined in the following section. This leads to the possibility, explored in section III, that there is yet a further approach which steers clear of assessments of probability.

II ASSESSING PROBABILITY

The nature and assessment of probability has been treated extensively outside the law, but the present enquiry into degrees of probability under the *Proudman v. Dayman*[86] defence justifies only a limited attempt to penetrate an extensive, and often intricate, web of ideas.[87]

[79] *Ibid.*

[80] For code jurisdictions, consider also the difficulty about future situations raised by *R. v. Gould and Barnes* [1960] Qd.R. 283.

[81] (1973) 5 S.A.S.R. 567.

[82] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[83] *Ibid.*

[84] [1964] W.A.R. 63.

[85] [1969] S.A.S.R. 141.

[86] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[87] Four useful overviews of probability are:
Nagel, 'Principles of the Theory of Probability' in *International Encyclopedia of Unified Science* (combined ed. 1955) I, 341;
Black, 'Probability' in *The Encyclopaedia of Philosophy* (1967) VI, 464; De Finetti,

Initially, a distinction may be drawn between three different judgments of probability: qualificatory, mathematical or statistical, and, as explained below, those classified by Russell and Ayer as judgments of credibility.[88] These distinctions can be made here without exposure to hoary disputes about the unitary or multi-form nature of probability.[89]

Qualificatory judgments of probability, which have been brought to attention mainly by Toulmin, are often discernible in statements like: 'It will probably rain tomorrow'. Such a statement involves a qualified assertion, 'probably' functioning as a 'guarded guide' in that it acts as a disclaimer should the unexpected occur.[90] This dimension of probability is a matter of significance both generally and, as will be seen, in the context of mistake, but clearly provides an incomplete picture. Thus, in the example above, many would claim that the use of 'probably' is declaratory, as well as qualificatory, in the sense that reference is being made to some sufficient objective probability. It is this objective content which is of particular present concern.

Judgments of the second class are those which are mathematical, in that they relate to the calculus of chances, or statistical, in the sense that some feature is distributed in some specified class with some frequency. Thus a judgment about mathematical probability would arise where it is said that the probability of throwing a double six with a true pair of dice is 1/36. This proposition involves the application of the calculus of chances in that a ratio is inferred from other ratios, and, it should be noticed, does not tell us what would happen in any actual game: to assume that the calculus of chances will in fact be reflected in practice involves an empirical assumption (an assumption which involves what is here termed a judgment of credibility). A statistical judgment likewise operates within the confines of a formal theory (relating to frequency within a class) and any attempted extrapolation to individual instances in practice again requires an assumption to be made.[91] Consequently, as far as regulatory offences are concerned, judgments of mathematical or statistical probability will be of rare relevance: unless we have offences

'Probability: II Interpretations' in *International Encyclopaedia of the Social Sciences* (1968) XII, 496;
Bowman (ed.), *Expectations, Uncertainty and Business Behaviour* (1958) 11-29.
On the closely related topic of decision-making in uncertainty, three useful discussions are: Edwards and Tversky (ed.), *Decision-Making* (1967); J. Cohen, *Behaviour in Uncertainty* (1964); and Brichacek, 'Use of Subjective Probability in Decision-Making' (1970) 34 *Acta Psychologica* 241.

[88] Russell, *Human Knowledge* (1948) 356-61; Ayer, *Probability and Evidence* (1972) 27-8.

[89] See Black, *op. cit.*; Lucas, *The Concept of Probability* (1970).

[90] Toulmin, *The Uses of Argument* (1958) ch. 2; Lucas, *op. cit.* ch. 1. For criticisms of such an approach see Lucas, *op. cit.* ch. 2; Kyburg, *Probability and Inductive Logic* (1970) ch. 1; King-Farlow, 'Toulmin's Analysis of Probability' (1963) 29 *Theoria* 12.

[91] Ayer, *op. cit.* ch. 2.

directed, say, at the owner of a class of items with a statistically measurable incidence of some prohibited feature, then judgments of credibility will always be in question. Judgments of credibility arise when particular events are in issue, as in the statements 'I believed that probably V was not a police officer acting in the due execution of his duty' or 'Probably none of my employees will contravene this statute'. Here an assumption is made on the basis of experience, perception, or other trustworthy procedures which do not involve that direct connection between evidence and proposition so central to mathematical or statistical judgments (such judgments, however, may sometimes provide the backing for a judgment of credibility, as in an actual game of dice). Probability judgments of this class are those typically arising in the context of regulatory offences, as well as in the inductive assumptions of science.

A traditional difficulty about judgments of credibility has been to find some objective form of measurement, an intractable and much pursued task.[92] Our present concern is not to distil a formidable background discussion, but rather to provide, from the standpoint of the *Proudman v. Dayman*[93] defence, an introductory account of the more obvious methods of evaluating probability judgments of this third and typical class. Three methods are considered here, under the following heads:

(a) Logical relations;

(b) Betting quotients; and

(c) Confidence ratings.

(a) LOGICAL RELATIONS

A number of philosophers have viewed probability, in judgments of credibility or otherwise, as involving logical relations between a proposition and its supporting evidence.[94] Some, including Carnap, have developed highly sophisticated systems of inductive logic with a view to explicating the precise nature of these logical relations. In crude essence, it has been thought possible to adopt a semantic language representing the various permutations and combinations of relevant evidence and alternative hypotheses, and by means of various axioms of calculus and a system of weightings, to obtain a quantitative measure of the extent to which q (evidential proposition) confirms p.[95] The logical systems evolved by Carnap and his followers involve an intricate symbolism. But even if

[92] In addition to the material previously cited, see Keynes, *A Treatise on Probability* (1921) ch. 3; Lakatos, 'Changes in the Problem of Inductive Logic', in Lakatos (ed.). *The Problem of Inductive Logic* (1968) *Studies in Logic and the Foundations of Mathematics* XXVIII 315; Black, 'The Justification of Induction' in Morgenbesser (ed.), *Philosophy of Science Today* (1967) 190.

[93] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[94] For a general account see Black, *supra* n. 87.

[95] Carnap, *Logical Foundations of Probability* (1950); Ackerman, *Non-Deductive Inference* (1966) ch. 3.

the lawyer's atheism about such symbolism could be overcome, account would need to be taken of what appear to be substantial criticisms of the logical relations approach.

A fundamental point of opposition is that, whatever the value to be derived from a logical system seeking to achieve coherence and rationality within a structure of logical relations, that system needs to be related to the empirical world. To quantify that evidence which is processed in the logical system requires the adoption of some objective procedure, not the arbitrary estimates of some philosopher or judge. If this hurdle is to be passed, we need more than just a conversion into semantical language.[96]

Another fundamental attack is one by Ayer. In his recent work, *Probability and Evidence,* Ayer has repeated an earlier argument that judgments of credibility do not involve probability as a logical relation:

> [t]he logical probability of a proposition p, relative to q, may be different from its probability, relative to r, and different again from its probability, relative to q and r. Suppose that these different probabilities are known to us, and that we are concerned with placing our bets on the event described by p. Have we any reason, on the logical theory, to prefer one of these estimates to another? The answer is that we can have none. I am assuming that we have made a correct assessment of the strength of the relation in each case, so that all the competing judgments of probability, the judgment that the probability of p, given q, is m/n, that the probability of p, given r, is m'/n', and so forth, are equally true: indeed, if these relations are logical, they must all be necessarily true. But then how can we decide between them? How can one necessary proposition be better than another? [97]

Evidential support, it may thus be argued, is distinct from probability in terms of logical relationship; although the two matters are connected the nexus requires an alternative explanation.

The upshot is that logical relationships appear to offer little guidance for assessments of the probability of particular events or situations. This is not to say, however, that such relationships might not be helpful when assessing the reasonableness of D's evaluation of relevant evidence, a matter relating to the more general question of reasonable grounds.

(b) BETTING QUOTIENTS

Some theorists, notably those of the so called subjectivist school,[98] have sought to measure probability by means of betting quotients, based on odds given by subjects in experiments, and various axioms and theorems

[96] See Toulmin's review of Carnap (1953) 62 *Mind* 86, 88-9, 95-6; Lakatos, *op. cit.* 372-3. On the advantages of symbols, see M. R. Cohen and Nagel, *An Introduction to Logic and Scientific Method* (1934) 117-20.

[97] Ayer, *op. cit.* 55. For reactions to earlier statements of Ayer's position see Körner (ed.), *Observation and Interpretation* (1957) 9 Colston Papers 18-30; Swinburne, *An Introduction to Confirmation Theory* (1973) 26-8.

[98] For general accounts of the subjectivist approach see Black, *supra* n. 87; De Finetti, *op. cit.;* Raiffa, *Decision Analysis* (1968) 273-8; Kyburg, *op. cit.* ch. 6. Betting quotients have also been a feature of other theories — see Carnap, *op. cit.* 165-6; J. Cohen, *op. cit.* 148-51.

in the calculus of probability. The betting quotients relate very much to a subject's personal estimates, objective measurement arising essentially at the stage when the calculus of probability is brought into play. The theoretical developments in this direction of probability theory are daunting to the novice, but apart from questions of legal practicality, the subjective nature of the initial probability assessments means that objective measurement is largely contingent upon the rationality and coherence derived from the calculus of probability, and upon later experience, which is used to correct the initial estimates. The chance that errors in the initial assignment of probability might survive subsequent experience has long been one source of criticism,[99] and of itself suggests that the subjectivist tradition offers little as a test of objective probability in the *Proudman v. Dayman*[1] defence. It is also to be noticed that regulatory contexts differ significantly from those of games of chance and scientific experimentation in that subsequent experience usually will be much less: where D is confronted by V, whom he takes to be illegally arresting him, we are not assisted much by the revelation that an initial estimated probability that V is not a police officer will be corrected by later events.

Nonetheless, betting quotients may be of some assistance. In a nation of gamblers it might be thought useful to translate degrees of probability into more homely conceptions of chance, thereby facilitating not only objective measurement but also the ascertainment of D's personal estimate of probability. This at least is a suggestion which emerges from the reference to a greater than fifty per cent chance in *R. v. Hallett,*[2] and the methods of measurement often employed in experiments upon decision-making.[3] However, several flaws seem apparent in such an approach as far as a test of responsibility is concerned, flaws which seem unlikely to be removed even by adopting such corrective methods as are employed, often ingeniously, in experimental designs.[4]

There are two obvious considerations which tend to show that the precision sought by means of betting quotients is illusory. The first is that even on the dubious assumption that betting is a matter of universal experience, odds are much affected by subjective factors, including unwillingness to lose, differing attitudes to the selection of odds, and the utility of gambling itself. This is evident from such differing strategies as those resulting from the 'sure-thing' and 'maximin' principles,[5] and from

[99] Kyburg, *op. cit.* 72.

[1] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[2] [1969] S.A.S.R. 141. See also *Koufos v. C. Czarnikov Ltd (The Heron II)* [1969] 1 A.C. 350, 389-91; [1967] 3 All E.R. 686, 694-5 (*per* Lord Reid).

[3] See *e.g.* Edwards and Tversky (ed.), *op. cit.* 32-5, 72-4; Slovic and Lichtenstein, 'Relative Importance of Probabilities and Payoffs in Risk Taking' (1968) 78 *Journal of Experimental Psychology* Monograph; R. Simon, 'Quantifying Burdens of Proof' (1971) 5 *Law and Society Review* 319.

[4] Slovic and Lichtenstein, *op. cit.*; Carnap, *op. cit.* 237.

[5] See Becker and McClintock, 'Value; Behavioural Decision Theory' (1967) 18

a variety of suggestions in the literature, including one that experience with T.A.B. betting (where allowance must be made for the behaviour of other gamblers) may influence the choice of odds.[6] Consequently, it would seem unwise either to impose responsibility on the basis of a personal estimate of odds, or to pluck objectivity out of the range of subjective influences.[7]

The second consideration is that betting quotients involve an assessment of utility as well as probability. High odds against the occurrence of a prohibited event may easily be a partial reflection of D's estimate of what degree of risk is reasonable in the context of the particular legislation, and also D's estimate of the impact upon him of some supposed monetary or other penalty. There is thus a need to separate estimates of utility from estimates of probability, and to make allowance for variations in the utility of money. Although these enquiries might yield ultimately to the skills of experts in decision-making theory, separating utility from probability has been a source of much difficulty.[8] One important question has been whether utility, measured say at one or more intervals of probability, increases or decreases in proportion to probability. Another problem has been to avoid the influence of money in betting estimates, sometimes by means of small amounts (thereby introducing the hazard of triviality) or neutral non-monetary options. In this latter regard the inevitable presence of sanctions, often of a serious nature, would jeopardize assessment.[9]

(c) CONFIDENCE RATINGS

Instead of using betting quotients, it might be thought fruitful to assess both objective and subjective degrees of probability by means of confidence ratings.[10] In the social sciences confidence or certainty of judgment often has been assessed by means of scales (for example, five, seven, or ten point, or percentage) or, less satisfactorily, by asking for verbal responses expressed in terms of degrees of confidence, sureness, doubt, assurance, or surprise.

Annual Review of Psychology 239. Consider also Ellsberg, 'Risk: Ambiguity and the Savage Axioms' (1961) 75 *Quarterly Journal of Economics* 643.

[6] See Phillips, 'The "True Probability" Problem' (1970) 34 *Acta Psychologica* 254, 259.

[7] For an attack on the idea of objective probability in these and other circumstances see Phillips, *op. cit.*

[8] Edwards and Tversky (ed.), *op. cit.* 38-40, 42, 44, 49-50, 68-70, 72-4; Becker and McClintock, *op. cit.* 248; Slovic and Lichtenstein, *op. cit.*

[9] Unless D is ignorant of the relevant offence or sanctions.

[10] In addition to confidence ratings, there are other similar possibilities to which much of the text applies (degrees of doubt, surprise *etc.*). Notions of confidence or degrees of belief have long been associated with probability theory. See Venn, *The Logic of Chance* (1876) ch. 6. For examples of confidence ratings in the behavioural sciences see Johnson, *The Psychology of Thought and Judgment* (1955) 368-9; Wilkins and Chandler, 'Confidence and Competence in Decision Making' (1965) 5 *British Journal of Criminology* 22; Brim, 'Attitude Content—Intensity and Probability Expectations' (1955) 20 *American Sociological Review* 68; Adams and Adams, 'Realism of Confidence Judgments' (1961) 68 *Psychological Review* 33.

In addition to the difficulty of separating utility (see above) two main objections to the use of confidence ratings as a measure of probability may be noticed. The first, which concerns both subjective and objective probability, arises from doubts about the existence of feelings of confidence; the second stems from disquiet about the range of variables affecting confidence judgments, and relates largely to the propriety of attempting objective assessment.

It has been remarked sometimes that our experience shows that intensity of feeling is often absent; 'the beliefs which we hold most strongly are often accompanied by practically no feeling at all; no one feels strongly about things he takes for granted.'[11] In response to such an observation, one writer, Kneale, has contended that feelings of confidence are absences of doubt or questioning: '[w]hen we speak, as we admittedly do, of feeling confident, we are referring, I think, to the absence of serious doubt or questioning from our minds, much as when we speak of feeling tranquil we are referring to the absence of uneasiness.'[12] On this view, conviction in a belief would be expressed by saying 'I do not feel any doubt at all that *p*.'

The above views have been countered by Price, whose argument is essentially to the effect, first, that to analyse confidence in terms of absence of doubt, although partially true, fails to capture the full significance of the notion, and, second, that 'feeling' does not necessarily involve some emotional response: it can also connote, as in the present context, a state of mind which is 'lived through' or 'enjoyed' by the person who has it.[13] On this view we can thus continue to speak in terms of feelings of confidence, subject however to the caution that 'feeling' not be used as a measure of the emotion or liveliness associated with beliefs.

A second, and much more forceful, objection is that so many immeasurable variables intrude into judgments of confidence (or judgments of doubt) that it is unwise to place much reliance upon objective assessment. Some possible variables, relating to both personal and group decisions, may be briefly stated.

A wide range of personal factors has attracted attention in the literature upon decision-making. Although much of the research is highly tentative, there are experimental results suggesting that confidence and assessments of risk are significantly affected by age, sex, motivation, time for decision, experience, and anxiety or defensiveness.[14] Thus, in one study in 1964,

[11] Ramsay, *The Foundations of Mathematics* (1950) 169.
[12] Kneale, *Probability and Induction* (1949) 16.
[13] Price, *Belief* (1969) 282-9.
[14] Relevant literature (vast) includes: J. Cohen, *op. cit.* ch. 8; Kogan and Wallach, *Risk Taking* (1964); Kogan and Wallach, 'Risk Taking as a Function of the Situation, the Person and the Group' in *New Directions in Psychology* (1967) III, 111; Phillips, *op. cit.* 262-3; Brichacek, *op. cit.;* Irwin, 'Stated Expectations as Functions of Probability and Desirability of Outcomes' (1953) 21 *Journal of Personality* 329;

Kogan and Wallach examined the significance of anxiety and defensiveness as personality dispositions generally affecting the willingness or reluctance of student subjects to take risks. The results suggested a variety of connections between these dispositions and confidence or risk-taking. In the case of defensiveness, for example, the authors' view was that this disposition would tend to produce high and low judgmental confidence and, respectively, risk-taking and conservatism. Defensiveness, it could be contended, implied a strong concern with image maintenance, and the above degrees of riskiness may be a component of the self-image of a defensive person.[15]

Such research, along with common experience, indicates the need for extreme caution in adopting an objective measure of confidence for the purpose of assessing probability where the *Proudman v. Dayman*[16] defence is in issue. Given the practical impossibility of taking subjective variables properly into account, this approach would involve the obvious danger of an improper conviction where D, a sceptical fellow, happens to have less confidence in his belief *p* than is regarded by some judicial arbiter as appropriate in the case of 'normal' people engaging in the same behaviour. Others, more fortunately placed, might attract an undeserved acquittal by manifesting their personality in terms of a sufficiently high degree of belief.

Decisions within organizations attract a like concern. Quite apart from the effect upon personnel of variables such as those mentioned above,[17] consideration needs to be given to shifts in estimation of risk and risk-taking in the context of group decisions. Since 1961, when Stoner's study demonstrated a shift towards risk in the case of individual assessments subsequently exposed to group discussion, there has been considerable psychological research on the topic, to varying effect. The explanations given (including familiarization, leadership, and diffusion of responsibility)[18] are far from unanimous, and how frequently a risky shift occurs outside the laboratory remains at large. The value of these contemporary psychological exploits for our present purposes is that they discourage precise evaluation of group decision-making in terms of degrees of confidence.

Marks, 'The Effect of Probability, Desirability and "Privilege" on the Stated Expectations of Children' (1951) 19 *Journal of Personality* 332; Kersey, O'Neal and Pledger, 'Confidence in Impression Formation as a Function of Favourableness of Information and Expertness of Source' (1971) 24 *Psychonomic Science* 163; Feather, 'Subjective Probability and Decision under Uncertainty' (1959) 66 *Psychological Review* 150. Utility considerations, as discussed above with regard to betting quotients, would also be relevant.

[15] Kogan and Wallach, *Risk Taking* (1964) 195-9.

[16] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[17] A variety of different effects can occur within organizations. See *e.g.* Kidd and Morgan, 'A Predictive Information System for Management' (1969) 20 *Operational Research Quarterly* 149; Castles, Murray and Potter (ed.), *Decisions, Organisations and Society* (1971) 94 (optimism effect through distortion of information).

[18] For a survey of the risky-shift phenomenon see Brown, *Social Psychology* (1965) ch. 13.

III PROBABILITY v. RULES OF ACTION AS A GUIDE TO BEHAVIOUR

The previous section has been concerned to show the difficulties of assessing probability according to the meticulous model of reasonable belief. A more fundamental question, however, is whether estimates of probability are as important a guide to behaviour as is sometimes assumed.[19]

Scepticism about the significance of probability is frequently encountered, both in common experience and psychological comment. Thus, Cohen has observed that:

> [the pedestrian] is inclined to exaggerate his chance of not getting hit by a car; he bears the motto 'Accidents can't happen to me'. The probability of being involved in an accident on the roads during any week is (in Britain, for example) about one in 8000. This seems negligible to the pedestrian by comparison, say, with his chance of winning the first prize in a lottery, where the order of magnitude of the odds belongs to the realm of radio astronomy.[20]

A more penetrating comment emerges from Phillips' caution that we need to look critically at what is meant by a good risk-appraiser: some people may be bad estimators of degrees of risk but highly effective decision-makers in terms of the number of correct predictions about actual outcomes. One decision-making experiment, which involved problems of classification to be answered on a 10-point probability scale, led Phillips to report:

> [t]wo of the 20 subjects caught my interest: they almost always used the most or next-most extreme categories. I later asked the most extreme subject why he was always so sure of himself, especially in the light of his less-than-perfect success rate (it was 66.7% overall). He replied that on each trial he felt quite sure he was correct. Now suppose he was telling the truth. Then, he was reporting his feelings of uncertainty as honestly as he could and so should qualify as a 'good' assessor. Yet his payoff-ranking (compared to the other subjects) was low, seventh from bottom, so [by some theorists' standards] 13 subjects were 'better' than he. Why, when he ranked fifth from the top in number of correct identifications, do we deem him a relatively poor assessor? Because he was too extreme in his judgments. But on what basis do we say he was extreme, for he said he reported what he felt? Here is the crux of the problem: we, as onlookers, feel that he should have paid more attention to his record of successes . . . But this assumption, and that is all it is, reveals our probability-is-relative-frequency upbringing.[21]

[19] Consider Bishop Butler's well-known saying that probability is the guide to life, and the references to probability in formal judicial definitions of both recklessness and the tort of negligence.
For one interesting psychological study relating to this aspect of human judgment see Slovic, 'Analyzing the Expert Judge' (1969) 53 *Journal of Applied Psychology* 255.
[20] J. Cohen, *op. cit.* 73-4.
[21] Phillips, *op. cit.* 261.

It is now time to put forward a constructive program. Scepticism about the role of probability as a guide to life does not mean that we have nothing to go on. Frequently we tend to be governed much more by rules of action than by assessments of probability. Probabilities are often swamped out by other influences of divergent kinds. In some situations, there is simply no time to worry about probability; in others we need to rely upon expert advice or even to recognize that no probabilistic evidence is readily available.

This is hardly a novel point of view. It has been noticed by Russell in his treatment of judgments of credibility,[22] and is in accord with suggestions that, instead of constructing an inductive logic of science, it is more fruitful to observe the actual ways in which scientists formulate and test hypotheses.[23] Furthermore, the creation of specific rules in the context of some general principle is of course a familiar approach to vagueness and uncertainty, in law and elsewhere.[24]

The significance of rules of action may now be illustrated by reference to *Maher v. Musson*,[25] *Reynhoudt*,[26] and situations involving organizations. A brief account of the advantages of rules of action then follows.

(a) *MAHER v. MUSSON*[27]

The fact situation in *Maher v. Musson*[28] is a useful source of examples. Consider first the position of D, a commercial carrier, who transports the

[22] Russell, *op. cit.* 416-17.

[23] Kuhn, *The Structure of Scientific Revolutions* (2nd ed. 1970); Harre, 'Dissolving the "Problem" of Induction' (1957) 32 *Philosophy* 58.

[24] (a) In law see Williams, *op. cit.* 103-5; Holmes, *The Common Law* (1923) 110ff.; Green, *The Litigation Process in Tort Law* (1965) 302-5; Maitland, *Equity* (2nd ed.) 122-3; Linden, 'Custom in Negligence Law' (1968) 11 *Canadian Bar Journal* 151; Ellinghaus, 'In Defence of Unconscionability' (1969) 78 *Yale Law Journal* 757; *Koufos v. C. Czarnikow Ltd* (*The Heron II*) [1969] 1 A.C. 350, 399-401; [1967] 3 All E.R. 686, 701 (*per* Lord Morris of Borth-y-Gest).
It follows that static or inflexible rules of action are not contemplated in the text. As suggested by the experience following Holmes' view of negligence, particular rules of action can become obsolete.
Consider also the position as regards degrees of proof. Triers of fact are required to make probabilistic estimations, but there may well be various identifiable patterns of sufficient evidence convertible into rules of action for the guidance of juries or magistrates.
In this direction note Winter, 'The Jury and the Risk of Non-Persuasion' (1971) 5 *Law and Society Review* 335; Eggleston, 'Probabilities and Proof' (1963) 4 *M.U.L.R.* 180; Eggleston, 'The Assessment of Credibility' in Morris and Perlman (eds.), *Law and Crime* (1972) 26; Edwards, 'Proof and Suspicion' (1969) 9 *University of Western Australia Law Review* 169; Williams, *Proof of Guilt* (3rd ed. 1963) 186-90. Compare *R. v. Tolson* (1889) 23 Q.B.D. 168, 177 (*per* Wills J.).
(b) In other contexts see the three interesting works:
Braybrooke and Lindblom, *A Strategy of Decision* (1963); Bowman (ed.) *op. cit.;* Vickers, *The Art of Judgment* (1965).
Note also Castles, Murray and Potter (ed.), *op. cit.;* Knight, *Risk, Uncertainty and Profit* (1921) chapters 8 and 9.

[25] (1934) 52 C.L.R. 100.

[26] (1962) 107 C.L.R. 381; [1962] A.L.R. 483.

[27] (1934) 52 C.L.R. 100.

[28] *Ibid.*

nefarious spirits from chemist A to chemist B. Assuming that he consciously considers whether the spirits are illicit, he might say to himself (under academic duress):

> I've nothing really to go on. To estimate relative frequency I'll need a lot of information which I don't have and my judgment as regards these particular spirits would be very crude anyway.[29] Moreover, if I start making enquiries I'll soon go out of business. My strategy, therefore, must be not to expect the worst, but to believe that these spirits are licit.

For such situations an appropriate rule of action would be: '[a]ccept, and proceed on the basis of, a lawful state of the world unless you have reason to suspect otherwise.' [30] Given the absurdity here of a safety-first *credo*, this would be a reasonable strategy, and, in terms of the time-honoured formula 'reasonable grounds for belief', would constitute the 'ground' for belief rather than any balancing of weights or probabilities in relation to evidence about the particular spirits which D has ventured to carry.

This leads to a second question, raised earlier, which relates to the meaning of 'reason to suspect'.[31] What result in *Maher v. Musson*[32] if, in response to D's query 'Are these spirits all right?' the chemist supplier had said:

> [h]ow do I know? Whether or not spirits are illicit depends upon all sorts of events which could have happened without my knowledge. I bought these spirits from a reputable wholesaler, but as you know, there is a lot of white collar crime in the chemicals industry, even in the best companies. If you ask them, all they will ever say is that of course the spirits are licit, and that the lower price merely reflects the benefits of large scale production and increased competition.

In cases such as this what must D do to remove an initial 'reason to suspect' [33] aroused by a low price? Before obtaining the spirits, must he acquire further evidence which substantially increases the probability that they are licit?

Although D may remove a 'reason to suspect' by acquiring further probabilistic evidence, there is another way, dependent upon compliance with rules of action. Suppose that, in the example given, D follows up his first enquiry of the chemist by approaching the reputable wholesaler concerned. He receives the answer predicted by the chemist. In one sense D still has a 'reason to suspect':[34] his subsequent enquiry has not made it

[29] Ayer, *op. cit.* 43-53. Contrast attempts to relate inductive inference to relative frequencies (*e.g.* M. R. Cohen and Nagel, *op. cit.* 151ff.; *Koufos v. C. Czarnikow Ltd* (*The Heron II*) [1969] 1 A.C. 350, 410-12; [1967] 3 All E.R. 686, 708 (*per* Lord Hodson)).

[30] For a useful treatment of accepting testimony as a basis for believing see Price, *op. cit.* 112-29.

[31] *Maher v. Musson* (1934) 52 C.L.R. 100, 104.

[32] (1934) 52 C.L.R. 100.

[33] *Maher v. Musson* (1934) 52 C.L.R. 100, 104.

[34] *Ibid.*

significantly less likely that the spirits are illicit. Yet here we might well conclude that D no longer has a 'reason to suspect',[35] primarily because he has manifested his willingness to comply with the legislation and, in so far as some pressure upon the supplier is created, to assist in its operation. In more practical terms, it may be said that D has satisfied a rule of action: '[i]f the price is low look into the reasons. Discover more relevant evidence if you can, but above all, show that you care.'

In such cases of negation of an initial 'reason to suspect' [36] by compliance with a rule of action, D is in effect increasing the utility of, or justification for, his behaviour in order to offset the degree of risk or probability initially associated with the fact that say the spirits carried a low price. This method of achieving exculpation tends to diminish the need for precise evaluations of probability: the vagueness of initial assessments of probability on the basis of a low price, and a like difficulty of ascertaining probability after D has made his subsequent enquiries, fades as we become concerned with the merits of D's actual behaviour in the situation. We tend to found responsibility not so much upon ethereal degrees of probability as more down to earth questions like 'Did he do his best to find out whether the spirits had an illicit origin?'; 'Did he do enough to indicate a sufficient concern about the operation of the legislation?'; 'Did he make it plain to the suppliers that he wouldn't tolerate the distribution of illicit spirits (as by threatening to tell the police)?'; or 'Did he tell the police about his suspicions?'[37] Such questions of utility or justification are more suitable as tests of responsibility than are those directly concerning probability; at least in many situations, degrees of utility or justification are readily convertible into the practical currency of rules of action. In terms of a meticulous model of reasonable belief, the requirements for fault may thus be somewhat skewed, but this seems very difficult to avoid given the problems associated with measuring probability.

(b) *REYNHOUDT*[38] — ASSAULTING A POLICE OFFICER IN THE DUE EXECUTION OF HIS DUTY

The *Proudman v. Dayman*[39] defence has been applied in *Reynhoudt*[40] to an offence of assaulting a police officer in the due execution of his duty: if otherwise within the defence, a reasonable mistaken belief in relation to the status element 'police officer' or that of 'in the due execution of his duty' will produce an acquittal. Now a feature of such status offences, as they flow from the draftsman's pen, is that often they leave at large the question of what precisely people are supposed to do to avoid con-

[35] *Ibid.*
[36] *Ibid.*
[37] Questions about 'prescriptive' and 'conformative' negligence may thus be raised. For that distinction see Dubin, 'Mens Rea Reconsidered: A Plea for a Due Process Concept of Criminal Responsibility' (1966) 18 *Stanford Law Review* 322, 390ff.
[38] (1962) 107 C.L.R. 381.
[39] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[40] (1962) 107 C.L.R. 381; [1962] A.L.R. 483.

viction. The task of legislating more precise rules is left to the courts, for reasons of greater familiarity with concrete fact situations, flexibility, and avoidance of difficult or embarrassing policy questions.[41] The courts' rule-making function is of present interest because, as may be shown for the offence of assaulting a police officer in the due execution of his duty, rules of action can have the effect of making enquiries about probability irrelevant in many of the situations covered by the particular offence.

Suppose that D is approached brusquely by A, a plainclothes police officer, who attempts to arrest D for a minor offence. Events occur quickly without any endeavour by A to produce identification. D considers the possibility that A is a plainclothes police officer, and, on the basis of A's appearance and the failure to produce identification, believes that he is not. He uses some force to resist the arrest. Is his responsibility dependent upon the existence of some objective degree of probability that A was not a police officer acting in the due execution of his duty? Yes, if the requirement 'reasonable grounds for belief' is taken to mean reasonable *evidence* for belief. But this seems too limited a view. 'Grounds' is a broader notion than evidence, and seems to import wider considerations of reasonable behaviour. Thus, it may well be said that D has a reasonable ground for his belief in that A has not identified himself, despite an opportunity to do so. On this approach we see the emergence of a rule of action: if plainclothes police officers do not identify themselves, given adequate opportunity (or, perhaps, a specific request by D), force falling short of the infliction of serious harm may be used to thwart an attempted arrest. If such a rule be identified, we can let probability off the hook. Whether or not A has identified himself assumes such significance that it becomes pointless to enquire 'How sure could one be that he wasn't a police officer?'. Even if A had told D 'I'm a police officer', this information would fade into the background if one takes a rule requiring positive identification as the true path to responsibility.

Two points should be made by way of disclaimer. First, the rule of action given above may be controversial: some may say that it is too much to require identification, even where reasonably easy to provide.[42] Should such sobering counsel prevail, there may of course be alternative rules of action which also serve as a subduing influence upon probability. The second point is that probability cannot always be suppressed, as possibly in situations where an identification card is presented to D quickly, with little or no time for perusal. There comes a point at which rules of action become exhausted and probability takes us over.

[41] In the last respect, consider *August v. Fingleton* [1964] S.A.S.R. 22 and the position of diabetic drivers.

[42] Consider further Chevigny, 'The Right to Resist Unlawful Arrest' (1969) 78 *Yale Law Journal* 1128.

(c) ORGANIZATIONS

Rules of action are very much in evidence when we come to apply the *Proudman v. Dayman*[43] defence to organizations.

The first explanation is that the top personnel covered by the identification principle (as recently endorsed by the House of Lords in *Tesco Supermarkets Ltd v. Nattrass*[44]) are often far removed from the events directly associated with a violation, or with a precautionary system. As a result, they have little evidence upon which to base a belief, being much dependent upon the advice and information of staff lower in the hierarchy.[45] Their position is somewhat akin to that of the messenger or carrier in the preceding account of *Maher v. Musson.*[46] Consequently, the following broad rules of action often apply: '[b]elieve in a lawful state of this corporate world unless you have reason to suspect otherwise', and '[b]elieve what you are told by others unless you have reason to suspect otherwise'.[47]

Secondly, in cases where corporations, through their top personnel, have a 'reason to suspect', this reason may be removed, as in examples based upon *Maher v. Musson,*[48] by increasing the utility of, or justification for, D's behaviour. Exculpation may thus be obtained, in many cases, not by lowering the estimate of risk, but by compliance with rules of action which overshadow questions of probability. In this regard, two points of especial relevance to corporations may be made, the first concerning resources, the second organizational integration of problems.

The resources and social leverage afforded by corporate opportunity are often such as to enable D to increase the justification for taking the risk, and to leave the probabilities to mature undisturbed. Take a situation suggested by *Tesco Supermarkets Ltd v. Nattrass.*[49] Assume there is a slight risk that goods for sale will be defective within the meaning of a relevant consumer protection law. Instead of trying to eliminate or reduce this risk, a difficult task for a retailer, a supermarket might decide to operate a free pick up and delivery service for any items which, contrary to present expectations, are discovered by consumers to be defective. In this event, responsibility should turn much more upon the adequacy of the protection thereby given to consumers than precise evaluations of how probable it was at any point of time that D would sell defective items.[50]

[43] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[44] [1972] A.C. 153; [1971] 2 All E. R. 127.
[45] Gordon, *Business Leadership in the Large Corporation* (1945) 75-9; Galbraith, *The New Industrial State* (1969) 70-1.
[46] (1934) 52 C.L.R. 100.
[47] Compare Price, *op. cit.*
[48] (1934) 52 C.L.R. 100.
[49] [1972] A.C. 153; [1971] 2 All E. R. 127.
[50] Other examples are suggested by the account of specifications with regard to

The constant need to integrate problems within an organizational framework also tends to diminish the significance of probability estimates. The onset of a problem concerning the possible commission of some regulatory offence rarely would warrant organizational preoccupation; other matters will usually compete for attention, resolution, and mutual adjustment. Thus, extensive commitments to a generality of instances may often impede flexible treatment of individual cases. Safety or precautionary systems may be governed by existing technology and ideas, and by shortages in these and other resources. Allowances for interpersonal competences and degrees of union tolerance may be essential. An efficient and yet economical preventive system covering a wide range of offences relating to D's operations may be more or less adequate, as regards any particular offence, than a reasonable system for a small organization or individual employer concerned with but a small range of regulated activities. In practice, organizations legitimately may be more concerned with balancing out such various considerations than estimating degrees of risk in the narrow context of one offence.[51]

A third respect in which rules of action are important to organizations arises from the rule-making function of regulatory offences, a function examined above in relation to the offence of assaulting a police officer in the due execution of his duty. There may be numerous offences, including those concerning the supply of defective merchandise or drugs, where to apply the *Proudman v. Dayman*[52] defence will amount, in many instances, to enquiring whether D has complied with some standard practice,[53] with little or no emphasis being attached to the degree of risk involved. In Australian jurisdictions, there are many statutory proscriptions in broad terms, without provision for the later development of detailed standards by means of statutory rules and regulations. Where offences are so widely defined, it is often to be expected that standards or rules of action will emerge. This is particularly so in the context of corporate endeavour. For one thing, enforcement officials are likely to negotiate with D upon an appropriate course of action.[54] Such negotiation in enforcement, although common in industry, is relatively unusual in the case of individual citizens; the need for preventive systems, for example, would usually

quality control in Nixon, *Managing to Achieve Quality and Reliability* (1971) ch. 6; and the discussion of trichinosis in Ballway, 'Products Liability based upon Violation of Statutory Standards' (1966) 64 *Michigan Law Review* 1388.

[51] On these integrative aspects of organization see Castles, Murray and Potter (ed.), *op. cit.* 91, 96-7; H. Simon, *Administrative Behaviour* (2nd ed. 1965) 102-3; Vickers, *op. cit.* 42, 202-5, 207, 221; Bowman (ed.), *op. cit.* 53-5.

[52] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[53] See Linden, *op. cit.*

[54] Law Commission, *Codification of the Criminal Law: Strict Liability and the Enforcement of the Factories Act 1961* (1970) Working Paper No. 30, 58. Consider further the implications of a preventive order approach to corporate crime, as advocated in Fisse, 'Responsibility, Prevention and Corporate Crime' (1973) 5 *New Zealand Universities Law Review* 250.

arise only in the case of some individual employers. Another reason is that, for many areas of regulated behaviour, detailed statutory standards will exist in other countries. Thus, the relatively intensive rule-making of some of the U.S. administrative agencies, including the FDA, may be received as a consequence of foreign investment, or of diligent enquiry by corporations, prosecutors, and judges. Foreign experience, by providing us with rules of action, may enable the avoidance of too much expenditure upon questions of probability.[55]

(d) ADVANTAGES OF RULES OF ACTION

The above discussion thus points towards testing responsibility on the basis of rules of action, rather than assessments of objective or subjective probability. This approach will not always be possible: as indicated earlier, there may be no appropriate rule of action, in which event we are thrown back upon the probabilistic estimations required under a meticulous model of reasonable belief (or some alternative). But where rules of action can be applied, several advantages accrue. Six may be mentioned.

The first is that the precise measurements of probability necessitated under a meticulous model of reasonable belief are largely avoided. If D has complied with a rule of action then, on the approach described here, it is irrelevant to ask what degree of probability is to be attached to the occurrence of the prohibited event.

Secondly, a rules of action approach does much to avoid not only excessively refined enquiries into degrees of probability but also unsatisfactory general rules that the prohibited situation be reasonably possible or reasonably probable (contrast *R. v. Bingham*[56] and *R. v. Hallett*[57] respectively).[58]

A third possible advantage is that judicial decisions are more open to scrutiny. Against the unhappy background of diverse views about the value of strict responsibility, it is to be expected, especially in courts of summary jurisdiction, that findings of guilt, or decisions upon sentence, will fluctuate. Removing the cover of probability from underlying rules of action may help to achieve a greater degree of stability.[59]

Fourth, the scope of some regulatory offences could become more certain. A frequent source of complaint, especially amongst businessmen, is that many regulatory offences are so widely drafted that it is impossible to avoid the risk of violation by reliance upon legal advice. In turn,

[55] A convenient and interesting source of rule-making examples and problems is Keeton and Shapo, *Products and the Consumer: Defective and Dangerous Products* (1970).

[56] [1973] 2 All E.R. 89.

[57] [1969] S.A.S.R. 141.

[58] See Section I.

[59] *Proudman v. Dayman* (1941) 67 C.L.R. 536; [1944] A.L.R. 64 may itself be an example. See Brett and Waller, *Criminal Law: Cases and Text* (3rd ed. 1971) 876-7.

questions of fairness can lead courts to adopt positions more lenient than would be appropriate given proper warning. If rules of action are stressed by the courts this problem might be reduced.[60]

Fifth, rules of action could help to reduce the controversial role now played in responsibility by the concept of negligence. Where sub-rules emerge in the context of a broadly defined offence, D's responsibility often could be seen as resting upon a deliberate, or at least reckless, failure to comply with the sub-rule; negligence intrudes only upon the broad surface proscription. This point has been made by Glanville Williams in the context of driving without due care: 'do not drive around that corner at more than 15 m.p.h.' could be one of a variety of sub-rules relating to behaviour within D's awareness.[61] More recently, in a study of the enforcement of factories legislation in England, it has been noticed that patterns of negotiated settlement frequently mean that where D is prosecuted it is because of a deliberate or reckless failure to comply with some requirement or modification which the parties have previously spelt out of the relevant statutory provision.[62] The factories study in particular suggests the merits of stressing rules of action where the *Proudman v. Dayman*[63] defence is in issue. However, there may be rules of action where to restrict responsibility to intentional or reckless breaches would be too limiting.

A final advantage to be outlined here relates to the persuasive burden of proof. Whether D carries a persuasive burden of proof when pleading the *Proudman v. Dayman*[64] defence has been a matter of disagreement. It may be mentioned that Professor Howard's view (that D does)[65] was not accepted by Bray C.J. and Zelling J. when considering this topic by way of *obiter* in the recent case of *Mayer v. Marchant*.[66] Suffice it here to say that if rules of action crystallize out, a persuasive burden of proof upon the prosecution seems much less onerous than if the defence is taken to be more concerned with matters less external or more personal to the accused, such as estimates of probability.

Two points need to be made by way of conclusion to this section. The first is that the importance attached here to rules of action does not imply some transformation of the *Proudman v. Dayman*[67] defence into a defence of reasonable behaviour *simpliciter*. The defence does require a mistaken *belief* upon reasonable grounds that the prohibited situation does not exist,

[60] All the more so in the event of decisions of prospective effect. Consider Levy, 'Realist Jurisprudence and Prospective Overruling' (1960) 109 *University of Pennsylvania Law Review* 1.

[61] Williams, *Criminal Law: The General Part* (2nd ed. 1961) 103-4.

[62] Law Commission, *Codification of the Criminal Law: Strict Liability and the Enforcement of the Factories 1961* (1970) Working Paper No. 30, 21-4.

[63] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[64] *Ibid.*

[65] Howard, *Strict Responsibility* (1963) 105-9; Howard, *Australian Criminal Law* (2nd ed. 1970) 379.

[66] (1973) 5 S.A.S.R. 567.

[67] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

whereas rules of action could operate quite independently of such a belief. The significance of belief and mistake in relation to probability is taken up in the next section.

The other point is that some approach is required for those situations where rules of action would be inappropriate, and some attempt to estimate probability must be made. The best approach may be to adopt a general rule, related to the treatment of recklessness in *R. v. Hallett*,[68] that it is sufficient for D to believe that *p* (non-existence of prohibited situation) provided the existence of the prohibited situation is not reasonably probable. The leniency produced at times by such an approach would at least seem preferable to the harshness of a general rule inculpating D where a reasonable belief would involve merely a *possible* violation. Furthermore, the impractical refinements of a meticulous model of reasonable belief would be avoided.

IV PROBABILITY, BELIEF, AND MISTAKE

The *Proudman v. Dayman*[69] defence requires a reasonable mistaken belief in a state of affairs which, if true, would mean that D's behaviour is innocent. To what extent do the elements of belief and mistake interrelate with the foregoing issues of probability? Does belief of itself require some minimum degree of probability, thereby imposing some significant condition upon the previously described approaches to the assessment of probability? Does D hold a *mistaken* belief if it was *true* that probably the prohibited state of affairs did not exist?

(a) BELIEF

The concept of belief in the *Proudman v. Dayman*[70] defence has yet to be judicially defined. By contrast, there are a variety of philosophical accounts of belief,[71] some of which require a minimum degree of probability. Three mainstream currents of opinion may now be considered.

The first approach, which lies in the mentalist tradition, contends that belief involves something in the nature of a strong commitment or conviction in relation to what is believed. Thus Newman, in response to Locke's views upon degrees of assent, argued that assent was unconditional in the sense that a complete and unreserved conviction was necessary.[72] Reference may also be made to Cook Wilson's distinction between knowledge, belief, and opinion, a distinction partly to the effect that belief, unlike opinion, involved a high degree of confidence.[73]

[68] [1969] S.A.S.R. 141.
[69] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[70] *Ibid.*
[71] The most comprehensive being Price's valuable recent work, *Belief* (1969). See also Helm, *The Varieties of Belief* (1973); Armstrong, *Belief, Truth and Knowledge* (1973).
[72] I am indebted here to the account in Price, *op. cit.* 130-56. See also Laird, *Knowledge, Belief and Opinion* (1930) 365.
[73] Wilson, *Statement and Inference* (1926) I, 101.

The conviction approach to belief, however, has diminished in popularity, as is evident from the other two approaches to be discussed. If adopted in the context of the *Proudman v. Dayman*[74] defence defendants would face an extremely exacting requirement. Fortunately, the chances of its adoption appear slight. One reason is simply that no mention has been made of such a severe restriction in past cases; *Maher v. Musson*[75] is worthy of particular attention in this regard.[76] Another is that so limited a view of the *Proudman v. Dayman*[77] defence would force reliance upon a comparatively less developed or used range of defences relating, somewhat haphazardly, to reasonable behaviour (duress, necessity, the *Snell v. Ryan*[78] defence of act of God or stranger).[79] *Ex abundanti cautela,* it may further be remarked that a requirement of conviction in belief would operate to the disadvantage of the person who carefully evaluates more evidence than is reasonably required and, as a result, cannot be as assured about *p* as someone less cautious.

A second approach, in the behaviourist tradition, involves a dispositional analysis of belief. On a dispositional analysis belief is not a mental state but rather a disposition to . . . just as the brittleness of glass is a disposition of glass to break when struck.[80] On one version of the dispositional analysis, a belief that *p* is a disposition to act as if *p* in various circumstances.[81] Such an analysis does not deny, however, that there may be mental images or states relating to *p*: these are manifestations of a belief that *p* as opposed to the belief itself.[82]

On such a dispositional analysis estimates about the probability of *p* are insignificant with regard to the minimum content of belief, unlike the position where belief is taken to require some degree of conviction. Adopting the dispositional approach would thus make belief in the *Proudman v. Dayman*[83] defence a less exacting requirement, and the behaviourist emphasis would blend well with the role rules of action may play as regards the issue of probability. Again, however, the chances of adoption seem slight. In the first place, the dispositional analysis, although much in vogue at various times, has been subjected to severe criticism.[84] According to one criticism, it reflects only part of the notion of belief,

[74] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[75] (1934) 52 C.L.R. 100.
[76] See Section I.
[77] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[78] [1951] S.A.S.R. 59.
[79] See Conclusion.
[80] Price, *op. cit.* 19-22, 243-301. The idea of dispositions came especially into prominence with the appearance of Ryle, *The Concept of Mind* (1949).
[81] Difficulties with such a crude acting as if dispositional analysis are taken up by Price, *op. cit.* 250-266.
[82] Armstrong, *op. cit.* 8-9.
[83] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[84] Levi and Morgenbesser, 'Belief and Disposition' (1964) 1 *American Philosophical Quarterly* 221; O'Connor, 'Beliefs, Dispositions and Actions' (1968) 69 *Proceedings of the Aristotelian Society* 1.

failing as it does to account for the difference between the following two propositions: (i) he is disposed to act as if *p* were true but does not believe *p*; and (ii) he is disposed to act as if *p* were true and does not believe *p*.[85] Against the possibility of the dispositional analysis being judicially adopted, there is also the point that past references in the cases to reasonable mistaken belief, conscious belief, and directing the mind, fit very much into the mentalist tradition.

A third approach is that developed by Price in a valuable recent work, *Belief*. To summarize very briefly, Price analyses belief in terms of both mental assent and dispositions, thereby achieving a compromise between mentalist and behaviourist positions. Thus, if D believes *p* he assents to *p*.[86] There are, in his explanation, the following degrees of assent:

(i) suspecting that *p*;

(ii) holding the opinion that *p*;

(iii) being almost sure that *p* but not absolutely sure; and

(iv) being absolutely sure that *p*, completely and unreservedly convinced of it.[87]

For Price, belief also has an important dispositional content, this being analysed, in considerable detail, along the lines that the disposition is 'multiform': in addition to behaviour or actions, there is a variety of other dispositions, including fear, hope, surprise, confidence, and doubt.[88]

Belief, like probability, is a contentious philosophical area.[89] Nonetheless, the elements of Price's approach might provide a workable basis for an adequate theory of belief under the *Proudman v. Dayman*[90] defence.[91] Two reasons stand out. First, the notion of assent is compatible with both the mentalist conception of belief in the case-law, and the possible requirement that D's belief be a conscious one. A second and more important reason is that the degrees of assent outlined by Price allow belief a wide scope. Suspect, it may be argued, covers much uncertainty. To suspect that *p* D need not even think that, on the balance of proba-

[85] Argued more fully by O'Connor, *op. cit.* 14.
[86] Price, *op. cit.* 189-240, 296-301.
[87] *Ibid.* 39-41.
[88] *Ibid.* 243-301.
[89] Consider, in addition to the material in Price, *op. cit.*, Armstrong, *op. cit.* (belief analysed as a 'state', not a disposition); White, Book Review of Price's *Belief* (1969) 10 *Philosophical Books* No. 3, 21 (critical of the use of assent to explicate belief).
[90] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.
[91] In other legal contexts belief has been treated variously: *Roe v. Bradshaw* (1866) L.R. 1 Ex. 106, 108 (*per* Pollock C.B.: 'to best of belief' equals 'belief'); *Vines v. Djordevitch* (1955) 91 C.L.R. 512, 522; [1955] A.L.R. 431 (there are gradations of knowledge and belief, which gradations 'extend from a slight inclination of opinion to complete assurance'); *Seven Seas Publishing Proprietary Ltd v. Sullivan* [1968] N.Z.L.R. 663, 666 (*per* McGregor J.: search warrant — 'suspect' does not amount to 'believe'); *R. v. Woods* [1969] 1 Q.B. 447 ('a pretty, good idea not sufficient for 'knowledge or belief' in handling stolen goods under the Theft Act 1968 (Eng.)).

bilities, p (as might be necessary to hold an opinion that p); provided he does not have available evidence more in favour of p's negation, he can be said to believe p.[92] On this view, belief depends not so much upon some minimum degree of probability that p (say that involved in the notion of suspect) but more upon the weight of evidence as between p and its negation. Perhaps some will balk at this interpretation of belief, which might be taken as excessively behaviouristic in influence. An important consideration, however, is that the wider the scope of belief in the *Proudman v. Dayman*[93] defence the less the need to trust to luck that such comparatively limited defences as duress, necessity, and act of God or stranger, will be developed by the courts as well as a general defence of say reasonable behaviour would allow.[94]

To conclude this part, we may respond to the question 'Does belief involve some minimum degree of probability that p?' with the suggestion that it is sufficient for D to suspect that p. As indicated above, this requirement could be satisfied by little in the way of probabilistic evidence, provided that there is more support for p than its negation.

(b) MISTAKE

Whether or not D has been guided by direct estimates of probability or rules of action in place thereof, his belief may often be analysed as a belief only that *probably* p. It may be argued that the belief is not mistaken even if p turns out to be false: it was *true* that *probably* p.[95] Fortunately for defendants there are counter-arguments.

The first counter-argument is that so limiting an approach to reasonable mistaken belief seems contrary to the implications of *Maher v. Musson*[96] and possibly *R. v. Tolson.*[97] However, perhaps the contention in issue might be supported by *Geraldton Fishermen's Co-operative Ltd v. Munro,*[98] a Western Australian case discussed earlier. The first ground for that decision, as set out before,[99] was that there was no evidence of any mistake in D's belief that three-inch crayfish (*i.e.* of legal size) would not produce tails of less than five ounces in weight. If that reasoning be accepted as valid, it might also be contended that an estimate of proba-

[92] Perhaps this is requiring too much (*e.g.* in some cases D reasonably might not consider the evidence relating to the negation of p); on the other hand suspect might be thought to involve some greater degree of certitude than would always be present under the definition in the text.
For further considerations see Ackerman, *Belief and Knowledge* (1972) ch. 3, especially 39-50.

[93] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

[94] A general rule of reasonable behaviour for regulatory offences is of course one of the main themes in Howard, *Strict Responsibility* (1963).

[95] Rose, 'Vicarious Liability in Statutory Offences' (1971) 45 *Australian Law Journal* 252, 256.

[96] (1934) 52 C.L.R. 100.

[97] (1889) 23 Q.B.D. 168.

[98] [1963] W.A.R. 129.

[99] See text in the paragraph preceding n. 49.

bility, like the ground for belief in *Geraldton,*[1] should itself involve a mistake. However, on this score, the reasoning in *Geraldton*[2] seems false.

In *Geraldton,*[3] the question whether any mistake was involved in D's belief that three-inch crayfish would not produce tails of less than five ounces was beside the point. The offence in question was being in control of underweight crayfish tails, *not* being in control of underweight crayfish tails produced from crayfish of three inches in length. D's belief concerning length constituted only an underlying reason for any mistaken belief that underweight tails were not in its control, and it is inappropriate at the level of underlying reasons for mistaken belief to insist upon a further mistaken belief. Assume a case of assaulting a police officer in the due execution of his duty. A struggles with B after believing that B unlawfully has tried to arrest him. A may well entertain the mistaken belief that B is not a police officer acting in the due execution of his duty although his underlying reasons for reaching that conclusion involve no mistake: he may draw his conclusion from true facts (for example, B's size, clothing, refusal to identify himself when so requested). A requirement that D make a mistake should be satisfied by a mistake operating only at the level of belief as to the non-existence of definitional elements. This proposition, it should be noticed, is entirely consistent with the possible acquittal of D on the basis of a reasonable mistaken belief which, although not operating at the level of definitional elements, nonetheless possesses sufficient exculpatory value (for example, a reasonable mistaken belief about facts relevant to a defence of duress).[4]

A second counter-argument relates to judgments of credibility which, as remarked earlier, are those which typically arise in everyday estimates of probability. Where such judgments are in question it would appear from the following analyses of Ayer and Lucas that it is legitimate to say that D's statement 'probably *p*', or even 'it is probable that *p*', is mistaken if *p* should turn out not to exist. Both analyses relate to what was previously identified as the qualificatory character of some probability judgments.[5]

In judgments of credibility Ayer has observed that although propositions are relative to evidence the connection differs from that which obtains in assessments of statistical and mathematical probability. To say 'probably *p*' is not to make so direct a judgment about the relevant evidence as in the case of statistical assessments and the like:

[1] [1963] W.A.R. 129.
[2] *Ibid.*
[3] *Ibid.*
[4] Note also *Mayer v. Marchant* (1973) 5 S.A.S.R. 567; *R. v. Logan* [1962] Q.W.N. 3; Elliott, '*Mistakes, Accidents and the will: the Australian Criminal Codes*' (1972) 46 *Australian Law Journal* 255, 328, 335-6 (mistake as to gun being loaded).
[5] See text to n. 90.

> [After having said that it is probable that the Republicans will win the next presidential election in the United States], let us suppose that the Republicans lose . . . Then someone who has not agreed that it was probable that they would win, might say to me: 'You see, you were wrong.' I might then reply: 'well, I only said it was *probable* that they should win', and this would be a way of exculpating myself. I should be reminding him that I had not entirely committed myself to their winning. I should not, however, be denying that I had been mistaken. But I could try to deny it. I might say: 'No, I wasn't wrong at all, and it *was* probable. I cannot help it if the improbable happened'. Would this answer be acceptable? There is no question but that it would be if judgments of credibility were judgments *about* the evidence on which they were based.[6]

A fuller argument is put forward by Lucas.[7] The statement 'probably *p*' is not merely elliptical, meaning only 'probably-on-the-basis-of-the-information-at-present-in-my-possession'. If 'probably' was elliptical in that sense, Lucas argues, then there would be no inconsistency at all between A saying 'It probably will rain' and B saying 'It probably will not'. But in fact both A and B are making a claim in relation to the same thing, namely whether it will rain tomorrow; both have said something notwithstanding the disavowal of infallibility arising from 'probably'. What then is the status of the evidence and arguments supporting A and B's claims? For Lucas, they are reasons for, not part of, what is said: 'they are criteria for the correct use of the sentence, not part of its meaning.'[8] If this be so, then clearly probably *p* can be said to involve a mistaken belief.

A third counter-argument, not confined to judgments of credibility, concerns mistake as an evaluator of fault. Mistake should not be a point of emphasis. Elsewhere in the criminal law a plea of mistake of fact involves a denial of the mental element of an offence.[9] As a matter of policy there is no reason to stress mistake in the one context and not the other.[10] On this approach, the *Proudman v. Dayman*[11] defence should be based, as far as is now possible, upon the issue whether D negligently failed to be aware of relevant definitional elements. Coherence with the logical status of mistake elsewhere would be impaired only to the extent that precedent dictates requirements of innocence, conscious belief, and belief in the non-existence of the prohibited situation (the last requirement being opposed to ignorance, or a belief state wherein D does not believe that the prohibited situation exists). Judicial references to *mistaken* belief

[6] Ayer, *op. cit.* 59-60.
[7] Lucas, *op. cit.* 54-5. See also Moore, *The Commonplace Book* (1962) 403.
[8] Lucas, *op. cit.* 55.
[9] Williams, *Criminal Law: The General Part* (2nd ed. 1961) 201-5. For flexible judicial interpretations of mistake in other contexts see *Boyle v. Wright* [1969] V.R. 699; *White v. Arthur Nicol Ltd* [1966] N.Z.L.R. 645; but note, regarding s. 24 of the Queensland Criminal Code, *R. v. Gould and Barnes* [1960] Qd. R. 283.
[10] Consider the uniformity concerning persuasive burden of proof preferred by Bray C.J. and Zelling J. in *Mayer v. Marchant* (1973) 5 S.A.S.R. 567.
[11] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.

on reasonable grounds should thus translate into a belief in the non-existence of the prohibited situation where D's failure to be aware of the existence of that situation is not unreasonable or negligent.

In summary, the effect of the counter-arguments above is that it is usually permissible to say that D has a mistaken belief where he believes that probably p (or that it is probable that p), and that where it cannot be said that D has made a mistake, this may well be irrelevant to the requirements of the *Proudman v. Dayman*[12] defence.

V CONCLUSION

A rules of action approach has been suggested in response to the question 'What is the relevance of degrees of probability under the *Proudman v. Dayman*[13] defence?' This approach seeks to avoid the need to make responsibility dependent upon necessarily crude estimates of probability. Beyond the advantages already claimed for such an approach it remains to mention one of wider import. It is simply that if degrees of probability are to be treated in this way we reinforce a basic point which is obvious but often neglected: fault in regulatory offences should be governed, not by the possible narrowness of belief, duress, necessity, or acts of God and strangers, but by wider considerations of reasonable behaviour.

It may often be fortuitous whether an accused can take advantage of the reasonableness ingredient of the *Proudman v. Dayman*[14] defence. At least two types of situation seem of practical importance. The first is where D, a cautious or skeptical person, refuses to believe when a reasonable belief that p would be warranted. The second is suggested by the *Geraldton*[15] case. In commercial settings especially the relevant offence may be so defined that say custody of one prohibited item in ten thousand can lead to a conviction, no matter how reasonable D's behaviour: to believe that *no* prohibited items are in D's custody would be unreasonable.[16] The upshot in these situations now seems to be that D's responsibility will turn upon the comparatively limited defences of duress, necessity, and act of God or stranger.

Fortunately, there is some room for the courts to correct the present imbalance in available defences. In this regard, it should be recognized that recently the South Australian Supreme Court has undertaken several constructive developments of the case-law concerning conscious belief,[17]

[12] *Ibid.*
[13] *Ibid.*
[14] *Ibid.*
[15] [1963] W.A.R. 129.
[16] See text to n. 49.
[17] *Mayer v. Marchant* (1973) 5 S.A.S.R. 567.

the *Snell v. Ryan*[18] defence of act of God or stranger,[19] and sentencing facts.[20] Perhaps the future development of even-handed rules for fault in regulatory offences may be assisted by enquiries into questions of probability under the *Proudman v. Dayman*[21] defence. In probability, it might be suspected, there is guidance for those who would regulate our lives.

[18] [1951] S.A.S.R. 59.

[19] *Kain and Shelton Pty Ltd v. McDonald* (1971) 1 S.A.S.R. 39, and, more importantly, *Mayer v. Marchant* (1973) 5 S.A.S.R. 567.

[20] *Law v. Deed* [1970] S.A.S.R. 374. This case has been followed in several decisions. See further Bein, 'Adulterated Food — Sentencing Problems in Strict Liability Offences' (1972) 7 *Israel Law Review* 149.

[21] (1941) 67 C.L.R. 536; [1944] A.L.R. 64.