PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

A Consideration of Certain Aspects of the Law Relating to Noise

J. B. Cronin

Phil. Trans. R. Soc. Lond. A 1968 **263**, 325-346
doi: 10.1098/rsta.1968.0022

III. NOISE AND THE LAW

A consideration of certain aspects of the law relating to noise

By J. B. Cronin

Department of Law, University of Southampton

1. Introduction

It is a widely held belief that the appreciation of the adverse effects of noise is a modern discovery. The general attitude of press and public and the antics of such organizations as the Noise Abatement Society seem to subscribe to this view.

It is, of course, nonsense. Aristotle in his *De Anima* written about 330 B.C. makes several references to the physiological and mental effects of noise:

'If a voice always implies a concord and if the voice and the hearing of it are in one sense one and the same, and if concord always implies a ratio, hearing as well as what is heard must be a ratio. This is why the excess of sharp or flat destroys the hearing. (So also in the case of savours excess destroys the sense of taste, and in the case of colours, excessive brightness or darkness destroys the sight and in the case of smell excess of strength whether in the direction of sweetness or bitterness is destructive.) This shows that the sense is a ratio.'†[1]

And later in the same treatise: 'In the case of [all the senses] excess of intensity in the qualities which they apprehend i.e. excess of intensity in colour sound and smell destroys ...the organs of the sense.'†[2]

Thus the subject-matter of this meeting is in no sense new though, perhaps, it has been forgotten. There is good precedent for this. The steam engine was invented as a mechanical toy by Hero of Alexandria in the second century B.C., but had to wait 2000 years before it was put to practical use; the geometry of conic sections which Apollonius of Perga studied for fun in the fourth century B.C. gave Kepler, again 2000 years later, his elliptical orbits of the planets. So if we are now rediscovering what Aristotle taught 2000 years ago it is not a unique situation.

Oddly enough the law of England appears to have been a little less tardy than medical and scientific thought. There can be no doubt that, since the fourteenth century at least, the law has given protection to the individual against noise and the intention of this paper is to make it clear that there is and has been for centuries much law on this topic and that it could be extremely effective if properly used.

There can, however, be few less suitable topics for a paper intended for non-lawyers. Apart from a few statutes there is no English law on noise *qua* noise. Such law as there is must be extracted from general principles and it is, therefore, necessary to understand certain basic legal concepts of general application. It is, of course, by such means that the lawyer preserves the mystique.

† Numbered notes appear at the end of the paper.

Unfortunately, too, certain aspects of the law can only develop satisfactorily in step with medical and scientific knowledge and, as I have already said, this has in many ways been retarded. Such lack of development is reflected in a relative paucity of authority on the legal treatment of the physiological effects of noise. Conversely, in a legal system based on an excessive respect for real property and in a sector where the law is 'lawyers law' and not shackled to the slow advance of science, the concept of compensation for loss of amenity is almost overdeveloped.

Nevertheless, lopsided though it be, there is a great deal of law on the subject either from explicit decisions of the courts or by extrapolation from decisions on closely analogous situations. In fact I believe that, with one or two relatively small additions, the existing law could well be adequate, if properly used, to deal with what has now been rediscovered as a serious problem. 'New' problems do not, especially in a common law system, always need 'new' law to deal with them. And the maxim 'When in doubt—legislate' which appears to be present parliamentary policy is not a happy one. Legislation should be the last resort after failure of all existing remedies.

2. Existing remedies

It is proposed to consider existing remedies in their natural legal divisions: first from the aspect of loss of amenity connected with the occupation of land, and secondly as they affect the individual as a person though, as will be seen, the two aspects necessarily overlap at times.

3. Noise and the occupation of land

The law on noise as it affects the occupation of land is a small part of the much wider field of nuisance. Noise is merely one of many forms of objectionable activity which may be classed under this heading. To understand the law on this point therefore involves an understanding of the general law of nuisance. This covers *inter alia* such diverse things as obstructing the highway, exposing a person with an infectious disease in the streets, selling food unfit for human consumption, letting off fireworks in a public place and keeping a brothel.

4. Nuisance

Definition of 'nuisance', covering as it does such heterogeneous notions, is difficult. There is no adequate judicial pronouncement but an acceptable and practical composite might be:

(*a*) Acts not expressly permitted by law or omissions to discharge a duty imposed by law which cause inconvenience or danger to the public at large acting within their normal legal rights: these are *public nuisances*.

(*b*) Acts or omissions which have been designated as nuisances by statute: *statutory nuisances*.

(*c*) Acts or omissions generally but not always connected with land which cause damage to another person in connexion with his use of land: *private nuisances*.

5. Forms of nuisance

It is perhaps unfortunate that the term 'nuisance' is used for all three of these concepts. They are based historically on completely different origins and practically they have different results. So:

(*a*) Public nuisance is a *crime* for which the Attorney-General may indict the offender for misdemeanour. Though the normal procedure is an application to the High Court for an injunction.

(*b*) Statutory nuisance (see §10 *post*) is not really nuisance at all in the sense that the term is used in respect of public and private nuisance. It is merely a convenient terminology for a parliamentary analogy. Like public nuisance it is a *crime* for which, after the exhaustion of administrative remedies, criminal proceedings before a magistrates' court are the appropriate remedy.

(*c*) Private nuisance is a *tort* the remedy for which lies in the hand of the aggrieved person by way of civil courts.

It would probably save much difficulty among lawyers and non-lawyers alike if different and distinctive names were to be found for these three categories.

6. Public nuisance

A public nuisance inflicts damage, inconvenience, danger or injury either on all the Queen's subjects or on a 'class' of them within the sphere of operations of the acts or omissions complained of.

As stated above it is a crime and the Attorney-General is the only party who may take action upon a public nuisance save as explained at §7 (*a*) below. Though, of course, such action will usually be instigated by a private individual or public authority. Although indictment for this misdemeanour is a possible remedy the usual modern procedure is an action, by the Attorney-General, for an injunction.

7. Distinctions between public and private nuisance

'The term "public nuisance" covers a multitude of sins great and small.'[3] Certainly it can and does cover noise. This is not in doubt. What is in doubt is when a nuisance becomes public (as opposed to private) and therefore a crime (as opposed to a tort) and subject to the action only of the Attorney-General (as opposed to that of a private individual). And, as so often happens in English law, no clear-cut dividing line can be discerned. Each case must be decided on its merits.

Thus,[4] when quarry owners conducted their operations in such a way that neighbouring householders were upset by noise, dust and vibrations and terrified by falling rocks the nuisance was held to be sufficiently widespread to constitute a public nuisance. The defence to the action was that, even if the acts complained of were a nuisance, the effects were spread over so narrow an area that while they might have been a private nuisance they could not be a public one. The Court of Appeal refused the argument in this case on the facts though the court refused to define a public nuisance. Lord Justice Denning (as he then was) said:

'The classic statement of the difference [between public and private nuisance] is that a

public nuisance affects Her Majesty's subjects generally, whereas a private nuisance only affects particular individuals. But this does not help much. The question: "When do a number of individuals become Her Majesty's subjects generally?" is as difficult to answer as the question: "When does a group of people become a crowd?"...So here I decline to answer the question...I prefer to look at the reason of the thing and to say that a public nuisance is a nuisance which is so widespread in its range or so indiscriminate in its effect that it would not be reasonable to expect one person to take proceedings on his own responsibility to put a stop to it, but that it should be taken on the responsibility of the community at large.'

Frankly and with the greatest respect one can only reiterate 'this does not help much' though one can see what the learned Lord Justice was getting at. And the point is a very important one as:

(*a*) A private individual has no right of action for public nuisance unless he can show substantially greater damage than that suffered by the public at large. For instance, if in the case quoted above one person had had a rock through the roof of his house in addition to the general loss of amenity (for no general structural damage to houses was proved) suffered by the 'class' concerned then he might well have been able to sue on his own account even though the nuisance was a public one.

(*b*) A single isolated incident can be a public nuisance; for private nuisance there must have been a continuing event or at least a repetition of the act complained of.

(*c*) The plea that the nuisance alleged is of the other category is a good defence. (It was offered as such in the case quoted above.) This leads, of course, to a situation that Mr A. P. Herbert must relish if he has thought of it (and he probably has) that a crime (public nuisance) can be offered as a defence to an action in tort (private nuisance).

8. Damage caused by nuisance

There can be no action for nuisance unless damage has resulted from the wrongful act. In the case of either public or private nuisance this damage may be *either* (*a*) some interference with the beneficial use of the premises occupied by the plaintiff, *or* (*b*) some physical injury to those premises or to the property situated on them, *or* (*c*) in the case of public nuisance *only*, personal injury to the plaintiff.

9. Nature of the damage

Excluding the question of personal injury for the moment the basis of an action for noise nuisance will, presumably, be interference with personal comfort. In which case the interference must be substantial and many subjective factors will be taken into account by the court in assessing the degree of discomfort permissible.

The classic exposition of this principle was made in 1851 when it was said that the noise must offend against the ordinary physical comfort of human existence: '...not merely according to elegant or dainty modes and habits of living but according to the plain and sober and simple notions obtaining among the English people'.[5] And this concept was further extended in 1879 by the dictum—'...what would be a nuisance in Belgrave Square would not necessarily be so in Bermondsey'.[6] Even making allowances for the greater

class-consciousness of the nineteenth-century judges, this same principle still applies today. Undue sensitivity will not be protected and the general ethos of the area will be considered when deciding whether or not a nuisance exists.

10. Statutory nuisance

As stated above this is not nuisance at all in the sense that it has so far been described. The *Noise Abatement Act* 1960[7] brought noise within the scope of the *Public Health Act* 1936[8] and thus subject to the procedures set out by this act. They are as follows:

(*a*) Where a local authority are satisfied that a noise nuisance exists they may serve an abatement notice on the person whose act default or sufferance causes the nuisance *or* on the owner or occupier of the premises concerned *or*, where the defect is structural (could it ever be re noise?), on the owner.

(*b*) Any works required to be carried out must be specified in the notice.

(*c*) If the nuisance is not stopped then the authority may proceed by way of complaint in a magistrates' court.

(*d*) In addition to the above procedure for a local authority any *three* persons may apply direct to the magistrates' court and institute proceedings in the same way.

(*e*) The court may then make a nuisance order requiring compliance with the abatement notice or in some other terms.

(*f*) A fine of £5 may be imposed as well as the making of the order. *Note*: The defence of 'best possible method' is available as a defence in statutory nuisance. On conviction for failing to comply with an Order a fine of £5 may be imposed together with a penalty of £2 per day for continuance of the non-compliance.

(*g*) There is a right of appeal to quarter sessions.

(*h*) If an Order is not complied with then the local authority (but not private individuals) may abate (see para. 14 *post*) and charge expenses to the guilty party.

(*i*) Where more than one party is involved the Order may be made against one or all.

Set out in this rather stark and severe way the procedures may look a little complex. In fact closer examination will show that they are extremely simple and, in my opinion, give a quick and inexpensive remedy for many aspects of noise nuisance which may interfere with the amenities of a small neighbourhood.

11. Private nuisance

Where the noise nuisance does not affect the public at large but only an individual this is a private nuisance. Private nuisance is concerned solely with the user or enjoyment of land and is almost certainly not available as the basis of an action for personal injuries.

The principles upon which private nuisance is based are identical with those for public nuisance, i.e. the same degree of interference with use or with enjoyment may become actionable save that a single isolated incident can never constitute a private nuisance.

12. Defences to and remedies for nuisance

The only true defence to an action for nuisance is that the act complained of was not a nuisance at all. Once it is established that damage to the extent envisaged by § 8 above has occurred there is little defence available.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

So, Salmond lists what he calls 'six ineffectual defences' which are in effect six popular misconceptions.[9]

(*a*) *Coming to the nuisance*. It is no defence that the nuisance existed when the plaintiff took over the property even if he were well aware of it.

(*b*) *Public benefit*. In the absence of statutory or other authority the fact that the public benefit conferred by the nuisance far outweighs the private loss is irrelevant. 'A court of equity may require a hospital so to arrange its internal construction as not to distress its neighbours by exposing them to the moans and groans of the operating room.'[10]

(*c*) *Suitability of place*. If a business cannot be carried on without causing a nuisance then it cannot be carried on at all. The fact that it is being carried out in a 'suitable' spot is irrelevant.

But this rule is, of course, mitigated by the concepts mentioned under the heading 'Damage' above at §8. The combination of these two concepts is, perhaps, best expressed in an American judgement:

'One who settles in a district which possesses natural resources of a special kind cannot prohibit the development of those resources merely because it may interfere in some degree with personal satisfaction or aesthetic enjoyment. No one can move into a quarter given over to foundries and boiler shops and demand the quiet of a farm. On the other hand, the noisy or noisome factory cannot with impunity invade territory stamped by use for residence.'[11]

(*d*) *Lack of negligence*. Negligence is irrelevant in nuisance: 'Herein lies the great merit of framing the case in nuisance as distinct from negligence. It greatly affects the burden of proof. It puts the legal burden where it ought to be, on the defendant, whereas in negligence it is on the plaintiff.'[12]

Thus the defence of 'best practical means' is not available in cases of common law nuisance as it is (in the guise of 'good commercial or industrial practice') in an action for negligence.

(*e*) *Contributory acts of others*. One man shouting may not be a nuisance. One hundred may be. In which case each of the one hundred may be guilty of nuisance.

(*f*) *Reasonable use of property*. No use of property is reasonable if it causes substantial damage to other persons. And malice may make normally reasonable activities into a nuisance.

Thus in the well-known case of *Christie* v. *Davey*[13] the beating of trays and the rapping on walls in retaliation for the noise of musical instruments were held to be a nuisance. Mr Justice North said:

'I am satisfied that [these noises] were made deliberately and maliciously for the purpose of annoying the plaintiffs.... If what has taken place had occurred between two sets of persons both perfectly innocent I should have taken an entirely different view of the case. But I am persuaded that what was done by the defendant was done only for the purpose of annoyance and, in my opinion, it was not a legitimate use of the defendant's house to use it for the purpose of vexing and annoying his neighbours.'

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

13. Defences to action for nuisance

There are, however, some defences to an action for nuisance both public and private though careful examination of them shows that they are unsatisfactory, vague and in some cases remote. So far as noise is concerned they are as follows:

(*a*) *Prescription*

The right to commit a private nuisance may be acquired by committing the act complained of for 20 years or more *without* the permission or consent and *with* the knowledge of the other party.

That such a defence exists cannot be doubted. How far it is of use in noise nuisance is a matter of grave doubt for technical reasons.

All the cases in which prescription has been successfully advanced as a defence to an action for nuisance have been such that the acts have not merely been continued for 20 years or more but have also been continuous in kind and in intensity. To acquire a right by long usage (and this is what the defence means) it is essential that there should be certainty and uniformity throughout the period '...for the measurement and determination of the use by which the extent of the prescriptive right is to be ascertained'.[14]

If, therefore, the quality or quantity of annoyance varies appreciably from day to day, hour to hour or even minute to minute it is difficult to see how the concept of prescription can apply.

Or, to turn the argument round, it would appear that to create a prescriptive right there must be (i) a nuisance, (ii) the nature, quality and intensity of the nuisance must remain unvaried over the period of prescription. It seems, therefore, that one may acquire the right to make a noise of, say, 90 dB at 8000 c/s by prescription. An increase to 100 dB, however (or even 91 presumably), would extinguish the protection of prescriptive right. It may even be, ridiculous though it may seem, that a lowering of the volume of the noise to 60 dB at 4000 c/s, which would, presumably, be much less annoying, would also result in the loss of the right.

A recent West Indian case[15] seems to bear out this contention. It was held that a court cannot order that a person shall be restrained from making any noise at all at any particular time of the day or night but only that he shall not make a noise amounting to a nuisance. The court may, however, in a suitable case, order that *within certain defined areas and times the duration combination and types of noises* may be restrained (e.g. restraining welding after 4.30 p.m. or at weekends).

It must be further noted that (i) this defence is only available in an action for private nuisance. 'No one can make a common (i.e. public) nuisance, for it cannot have a lawful beginning by licence or otherwise being an offence at common law.'[16] (ii) Prescription in respect of noise runs only against the present occupier of the land and not against his successors as it is impossible to imagine an easement to make a noise.[17]

(*b*) *Ignorance of the nuisance*

It is commonly asserted that no one is liable for nuisance unless he created it or continued it after knowledge or means of knowledge.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

In fact the cases on this point are obscure and ambiguous and it is fortunate that the author can envisage few situations in which the occupier, or his agents, could not be aware of a noise nuisance created on their property. Nevertheless, there is authority for believing that this is a defence.[18]

(*c*) *Statutory authority to commit the offence*

Where a statute authorizes the doing of a particular act explicitly or implicitly and the doing of that act inevitably involves committing what would be otherwise a nuisance then no remedy is available provided that every reasonable precaution has been taken by the doer consistent with the statutory power. So where a railway was given statutory powers the occupiers of houses near the line had no redress for the noise of trains.[19] Similarly, the powers given to gas, electricity and water authorities preclude any action for nuisance (subject to the provisos below) when they are carrying out work in accordance with their statutory rights and duties. The classic modern example in the field of noise is, of course, the operation of aerodromes and that problem is dealt with at § 17 (*d*) *post*.

In keeping with their veneration for land rights, however, the courts have tended to construe statutory powers to commit a nuisance narrowly or even restrictively. An extreme case was where a railway company was given powers for the 'construction and maintenance' of a railway but, in the absence of any express statutory authority to use locomotives on the railway (which one might have considered a reasonable implication), they were held liable in nuisance for sparks from the engines even in the absence of negligence.[20] In addition (though in the author's opinion this is contrary to the concepts involved in the strict law of nuisance) the negligent or unreasonable use of statutory powers may involve liability for nuisance.

In happier days statutory powers were often conferred with the proviso that nuisance should not be protected. Such provisos are rare today.

14. Remedies for nuisance

The following remedies are available for noise nuisance (as for any form of nuisance).

(*a*) *Abatement*

This means the personal removal of the cause of the nuisance by the complaining party without recourse to the courts.

'If *H* builds a house so near mine that it stops my lights or shoots water on my house, or is in any other way a nuisance to me, I may enter upon the owner's land and pull it down.'[21]

I hasten to add that this dictum dates from 1699 and it is doubtful whether demolition of the Post Office Tower, however justifiable on aesthetic grounds, would be justified by the maxim in 1967.

Nevertheless, circumstances may occur which thoroughly justify abatement for noise nuisance: a jammed siren which makes life intolerable, for instance. Local authorities have the same powers of abatement as a private individual and in the case of a public nuisance the individual must be able to show special damage before he can abate. There is controversy over the effect of abatement on any right of action in the courts. The better view appears to be that abatement destroys the right to an injunction (*post*) but not to damages.[22]

(b) Injunction and/or damages

'An injunction is a judgement or order of the court restraining the commission or continuance of some wrongful act or the continuance of some wrongful omission.'[23]

The restraint is, moreover, a powerful one as failure to comply with the terms of an injunction can lead to imprisonment. Injunction is a discretionary remedy (though this does not mean that it will be granted at the whim of the court) and will never be granted if the award of damages would be an adequate remedy. Nor will it be granted if the damage complained of is trivial or where it would be oppressive to grant an injunction.

An injunction can be and often is granted together with an award of damages.

Injunctions can be interlocutory or final. Interlocutory injunction can be granted by a judge in a semi-formal manner and often *ex parte*, i.e. after hearing only one side. A final injunction can only be granted at the end of the full legal process.

It is worth noting that, where the application for an injunction is linked with a claim for damages (and only then) a county court judge can grant an injunction.

Threatened nuisance can be the grounds for an injunction. It must, however, be the threat of a very substantial or irreparable nature. An injunction was refused in the case of a smallpox hospital being erected within 50 ft. of dwelling houses on the grounds that the plaintiff could not show 'a strong probability amounting to moral certainty that, if the hospital were established it would be an actionable nuisance'.[24]

(c) Indictment for misdemeanour

This is only available in the case of public nuisance and is so rare as to be of little practical importance today. It stresses yet again the fact that a public nuisance is a crime.

(d) Summary proceedings

See 'statutory nuisance' paragraph 10 *ante*.

(e) London

In London prosecution under the *Metropolitan Police Act* 1839.[25]

(f) Prosecution for by-law infringement

See paragraph 15 *post*.

15. By-laws

All local authority by-laws derive from statute (though there is theoretically still some common law right to make them). The enigma is that, if noise is really such a problem, local authorities do not make more use of their powers.

There are a number of statutes which authorize the making of by-laws; the general power most used is the one conferred by section 249 of the *Local Government Act* 1933[26] which allows county councils and borough councils to make by-laws for the good rule and government of their areas and '*for the suppression of nuisances*'. The section is so widely drawn that there appears to be no limit to the number of offences that could be created. Certainly almost all aspects of noise could, in theory, be included.

There are, however, two restrictive factors: (1) by-laws have to be confirmed either by

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

the Home Secretary or some other Minister, and (2) the courts have a right to consider the reasonableness of the by-law.

The courts will apply tests which very briefly are as follows:

(*a*) the by-law must be fair;
(*b*) it must be certain;
(*c*) it must be in line with the general law;
(*d*) it must be within the general powers of the authority.

Penalties under by-laws are those set out in the enacting statute of 40*s*. if no sum is fixed.

16. Who is liable for nuisance?

Subject to the somewhat doubtful limitations imposed by the rule that you cannot be liable for nuisance unless you were aware, or ought to have been aware, of the acts complained of, the occupier of premises must accept responsibility for nuisance even if it has been caused by a third party.

So when a town council failed to exercise control over a model aeroplane club operating in one of their parks with permission, the council was held liable for the nuisance caused.[27] It is very likely that they would equally have been held liable had the club had no permission as the occupier is also liable for the actions of trespassers on his premises if he knows (or ought to have known) what they have done.

17. Current problems

However arid and academic they may seem, the foregoing paragraphs represent, within the limits imposed by a paper of this kind coupled with the author's inadequacy, the existing law on nuisance. That is the law relating to the creation of noise to the detriment of the general public as a whole and the law relating to the interference by noise of the private citizen's quiet enjoyment of his land. Any current problems must, therefore, be examined and the legal position explained by reference to what has already been said.

It seems clear that the four most important problems, excluding pop groups, are noise from aircraft, noise from road traffic, industrial noise and what may be described as miscellaneous domestic noises. It is proposed to deal with them in increasing order of legal (and probably practical) complexity.

(*a*) *Unreasonable domestic noises*

The author believes that, were they properly and regularly used, existing legal remedies are adequate to deal with this problem. The numerous judicial pronouncements on the degree of uninterrupted enjoyment of land that have been made in the past have established a standard of sorts albeit that its outlines are vague and its frontiers shadowy.

Subject to the limitations on undue sensitivity previously mentioned it seems that the householder can protect himself reasonably well if he really feels strongly enough to do so. The financial implications of a high court action for nuisance may prove a little daunting, but the powers of the county court should be adequate to deal with this sort of problem. This should be a good deal less expensive though in fairness even in such an action the costs can escalate alarmingly on appeal.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

If three or more neighbours are outraged by the behaviour of another they will have, even supposing that they do not comprise a 'class' sufficient to make the nuisance a public one, proceedings under the Noise Abatement Act to fall back on. While a fine of £5 may, in these inflationary days, not be a great deterrent the mere threat of criminal action may be. And a £2 per day penalty for non-compliance soon adds up.

Finally, if local authorities were a little less inert they could do a great deal. By-law provisions, though they may have their limitations, can certainly take care of the ubiquitous transistor.

(*b*) *Industrial noise*

The effect of such noise on the employee is dealt with at §§ 19 to 29 *post*. The legal position in the area of the law we are now considering is as follows:

(i) The general public can be protected by an action for public nuisance as in *Attorney-General* v. *P.Y.E. Quarries* (§ 7 above).

(ii) The individual who is unreasonably disturbed in his occupation of land has his remedy by way of public nuisance if he can show special damage.

Although these remedies are useful and could, properly used, deal with many cases their failing is that they are remedial and not preventative. They merely give a relief from the results. And in many circumstances the relief may be unsatisfactory. No court, it is feared, is going to close a large factory because, say, one small house is being unreasonably discommoded by the noise. This would certainly come into the category of an 'oppressive' injunction and would not be granted.

Planning law might have done something here had it been devised on a different basis but in fact it does little. Certainly noise is one of the factors that can be and is taken into account when planning permission is sought. And planning permission in no way gives the right to commit a nuisance. But there the matter ends. Though there seems to be the possibility at least that increase in noise level (or even in its characteristics?) might constitute development requiring further permission.

There is justification for amendment of planning legislation here; perhaps to require greater inquiry into the noise potential of development and perhaps also on the question of noise insulation of machines and buildings. While I am aware that acoustics engineering is still a far from exact science no doubt some primitive steps could be taken by improved noise-specification for buildings. And siting and installation of machines could reduce noise levels appreciably. There is precedent of sorts in the *Thermal Insulation* (*Industrial Buildings*) *Act* 1957.[28]

(*c*) *Noise from road traffic*

The *Motor Vehicles* (*Construction and Use*) *Regulations* 1955 deal with all manner of noise from motor vehicles. Seven of the regulations deal specifically with noise but none prescribes a standard more precise than 'excessive'.[29] The responsibility for enforcement falls upon the police. In 1962 there were 9 730 000 vehicles registered and 6077 prosecutions. Such figures speak for themselves.

Speaking purely theoretically there appears to be no reason, in law, why an injunction should not be obtained against the user of a noisy motor vehicle on the highway; though the author has no knowledge of any such injunction having been granted. Such an

injunction would, of course, have to be granted on the basis of a public nuisance. Again the sanction of prison for non-compliance might well make such an injunction very effective. It is, of course, very unlikely that any such action will ever be brought. First catch your motor cyclist....

All in all there appears to be three points here:

(i) The regulations are ineffective because they are drafted in so wide and general a manner that proof is difficult. If acousticians could offer more specific and acceptable definitions of what is 'excessive' in any given set of circumstances then things might be better. Contraventions of the speed limits can be proved relatively easily by reference to a speedometer. An acoustically dependable 'noisometer' would very much improve the possibilities of regulation and enforcement. This is a job for the engineer not the lawyer. If such an instrument already exists and would stand up to the rigours of a law court then the regulations should be amended accordingly to allow its use.

The Minister of Transport (*Sunday Times*, 5 March 1967) has now said that she is to establish specific standards related to decibels. A maximum noise level of 90 dB for motor cycles and 85 dB for other vehicles is suggested. What is not explained is how and *under what conditions* these noise levels are to be measured.

(ii) The police appear to have neither the time, the inclination nor the staff to deal with this problem even if allowances are made for problems of proof.

(iii) Again prevention rather than punishment should be the aim. Strict rules on the design and, above all, the modification of vehicles should be made and enforced including the certification of all vehicles in respect of noise output. Given adequate engineering cooperation the author can see no serious difficulties in this.

Another possibility, of course, again totally outside the power of the lawyer, is the encouragement of improved design of relatively noiseless vehicles such as electric motor-cars and the prohibition of internal combustion engines in certain places. Or, perhaps, the return of the horse; with soundless plastic shoes of course.

(*d*) *Aircraft noise*

Aircraft noise is largely tolerated by statute. The *Civil Aviation Act* 1949,[30] section 41 (1), gives power to provide by order in council 'for regulating the conditions under which noise and vibrations may be caused on aerodromes'. It has been suggested that such powers do not include noise control rules:[31] I do not agree.

Regulation 10 of the *Air Navigation* (*General*) *Regulations* 1960 provides that noise and vibration may be caused (presumably *ad libitum*) by:

(*a*) aircraft taking off or landing;
(*b*) aircraft moving on the ground or water;
(*c*) engines being operated:
  (i) to test,
  (ii) to warm up,
  (iii) to check instruments.

Such provisions *prima facie* prevent any action for nuisance when the precise considerations of the regulations apply. Also the provisions of the *Noise Abatement Act* specifically exclude aircraft noise. But what of when the aircraft is in the air?

S. 40 of the *Civil Aviation Act* 1949 provides:

'No action shall lie in respect of trespass or *in respect of nuisance* by reason only of the flight of an aircraft over any property at a height above the ground which, having regard to wind, weather and all the circumstances of the case is reasonable, or the ordinary incidents of such flight so long as the provisions of [parts II and IV of] this Act and any Order in Council or order made [thereunder] are complied with.'

At first sight S. 40 of the 1949 Act and Regulation 10 of the regulations seem to give complete protection to aircraft against the possibility of an action for nuisance, public or private. And no doubt this is, in general, so. But there may well be limitations in the existing protection which could prove important. The following are a few of these considerations:

(i) It is submitted that, on general principles of interpretation, regulation 10 must be strictly interpreted. If, however, the term 'general principles of interpretation' is, as the author believes, meaningless, then regulation 10 should be strictly interpreted as a matter of policy by the courts in so far as it takes away basic rights. In which case all the terms used in the regulations and all the powers given would be construed in the most restricted way. The limitation on 'taking off or landing' and the arguments possible are obvious.

(ii) Similar considerations will apply to the interpretation of S. 40 in which case what does 'over' mean? Does it mean 'above' or 'directly above'?[32]

(iii) Is malice relevant as it may be in other nuisance cases?

(iv) What is meant by 'the provisions of [parts II and IV of] this Act and any Order in Council or order made [thereunder] are complied with'? In *Nash* v. *High Duty Alloys*[33] the Divisional Court held that any deviation, however trivial, from the precise terms of an exemption from a duty would involve the loss of protection by the exemption.

(v) If the propositions at paragraph 13 (*c*) *ante* are correct then any negligence or failure to take reasonable precautions will lose the protection of the statute.

The question of what constitutes negligence is considered at length in §19 *et seq. post* and on the basis explained in them it seems possible that in many cases the behaviour at aerodromes is legally negligent. It does, however, largely depend upon the technical development in noise suppression how far this concept can be carried.

(vi) It must also be remembered that there is a statutory right to damages against the owner of the aircraft whenever *material loss* is caused by aircraft in flight or taking off or landing[34]. This will include material loss by noise or vibration. It is to be hoped that the imminence of the Concord aircraft will not induce Parliament to reduce this, at present, absolute liability for reasons of prestige or commercial benefit.

It will be seen, therefore, that the protection given to aircraft operators which on the face of the bare words of the statute and the regulations appeared complete, has several potential flaws in it. It appears that an aircraft can commit a nuisance by noise.

18. Future action

Once again the foregoing indicates merely *ex post facto* action. Prevention should clearly be the aim. The Minister has recently indicated that he proposes to introduce new regulations which will include noise prevention as a factor in granting an airworthiness certificate to an aircraft.

19. Negligence and noise

In the context of noise the law of negligence is of little importance in public law. Inevitably, in the circumstances already discussed, if there has been negligence there has also been nuisance. And, as nuisance is not dependent on negligence it is much easier to proceed under the former. The burden of proof is less heavy.

There are circumstances, however, where nuisance is a completely inappropriate remedy. While public nuisance gives a right to an action for personal injuries private nuisance does not. What is more, private nuisance relates only to user of land. So what of circumstances where the damage resulting from noise is restricted to personal injury suffered by a single individual—or a number of individuals so small and restricted as to preclude them being considered a 'class' of Her Majesty's subjects? It is here that negligence becomes important.

20. Definitions of negligence (1)

Negligence like private nuisance is a tort. And like all torts its definition is difficult. The classic exposition is-:

'...the omission to do something which a reasonable man, guided upon those considerations which ordinarily regulate the conduct of human affairs, would do, or doing something which a reasonable and prudent man would not do.'[35]

Obviously, though such terms are beloved of the common lawyer, a definition which includes in its thirty-five words the expressions 'reasonable man', 'guided upon...human affairs' and 'reasonable and prudent man' helps very little. To further describe the 'reasonable man' as 'the man on the Clapham omnibus' while no doubt a striking analogy is equally facile and meaningless.[36]

21. Definitions of negligence (2)

Much more down to earth and therefore more helpful is the definition of a New Zealand judge who approached the problem as follows:[37]

'(*a*) What dangers should [the defendant] exercising reasonable foresight have foreseen?

(*b*) Of what remedies applying reasonable care and ordinary knowledge should [he] have known?

(*c*) Was the remedy of which [he] should have known for the danger [he] should have foreseen one [he] was entitled to reject as unreasonably expensive and troublesome?'

While this definition, too, is riddled with vagueness it is, in many ways, much more satisfactory attempting as it does to reduce the problem to its simplest terms. It sets out all the relevant points quite clearly: danger, the existence or otherwise of remedies and (a point often surprising to the layman) the cost of the remedies.

Of course the simplest and best way to describe negligence is as the state of affairs that would convince an ordinary jury that something that has been done might with reason have been done better and that someone has suffered as a result. Juries are the best judges of negligence. No doubt that is why they are no longer used.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

22. The duty of care

Not all negligence as defined above is actionable even though it cause damage to someone. In English law a prerequisite to liability for negligence is the owing of a duty of care by the negligent person to the party injured. To whom then is a duty of care owed? In a justly celebrated judgement Lord Atkin said:[38]

'...At present I content myself with pointing out that in English law there must be and is some general conception of relations giving rise to a duty of care, of which the particular cases found in the books are but instances. The liability for negligence, whether you style it such or treat it as in other systems as a species of 'culpa', is no doubt based upon a general public sentiment of moral wrongdoing for which the offender must pay. But acts or omissions which any moral code would censure cannot in a practical world be treated so as to give a right to every person injured by them to demand relief. In this way rules of law arise which limit the range of complainants and the extent of their remedy. The rule that you are to love your neighbour becomes in law: You must not injure your neighbour, and the lawyers' question: Who is my neighbour? receives a restricted reply. You must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injure your neighbour. Who then, in law, is my neighbour? The answer seems to be persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are called in question.'

However attractive this proposition may be it is not the law and it is not yet possible to lay down a general rule setting out the circumstances in which the duty of care arises. All that can be done is to list relationships which, from time to time, have been declared by the courts to embrace this duty. The categories are not yet closed but new ones cannot be predicted with any degree of certainty. Thus the relationships of doctor and patient, pupil and teacher, solicitor and client, road user and road user, master and servant have all been held to give rise to this duty.

Of existing relationships that we know contain the duty of care undoubtedly, from the point of view of noise, the master–servant relationship is the most important by far. It is no doubt possible, for instance, that following a wrong diagnosis of deafness the doctor might damage a patient's hearing by the negligent use of apparatus but the chances of other relationships falling into this category are remote. The question of noise negligence is therefore (in view of previous comments on the advantages of nuisance as a form of action when available) almost entirely restricted to the master–servant relationship.

23. Actions for negligence

In view of the increasing modern interest in the problem of noise it is rather startling to find that there is no reported case in which an employee has taken an action against his employer solely because of total or partial loss of hearing brought about by occupational causes. Sight, lungs and limbs have been regular subjects of actions: hearing never. Indeed it is difficult to find any case where loss of hearing has been put forward as a head of damages even in conjunction with other matters.[39] Nor has there been any consideration of this problem (so far as I am aware) in the learned journals in Britain or in America.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

It is, therefore, of considerable interest to the lawyer to examine the possibilities of an action by an employee against an employer for loss or impairment of hearing due to alleged noise negligence. One is almost driven to wonder whether there is some especially subtle difficulty in maintaining such an action.

24. Noise can constitute negligence

Can the production of excessive noise in such a context be, in itself, negligent? An analysis of the problem on the basis of Mr Justice Callan's *dictum* quoted above makes it clear that it can. It also shows the practical use of such analytical definition:

'*What dangers should* [*the defendant*] *exercising reasonable foresight have foreseen*?'

As long ago as 1903 an American judge said: 'That the subjection of a human being to a continuous hearing of loud noises tends to shorten life is, I think, beyond all doubt.'[40]

The exact nature, the intensity and the characteristics of the 'life shortening' noises are, I suppose, the purpose of the larger part of this meeting and are matters of controversy. But the general concept of the adverse physiological—and, for that matter, psychological—effects of noise is now surely common knowledge. No one today can claim that, where they are creating a noise, that they are not at least put on inquiry as to whether such noise is dangerous.

'*Of what remedies applying reasonable care and ordinary knowledge should* [*he*] *have known*?'

There are now organizations devoted to the control and suppression of noise. The Department of Sound and Vibration Research at the University of Southampton is but one of them. Consultation with such organizations could hardly be regarded as outside the reasonable care and ordinary knowledge of the reasonable employer. Or if such consultation is to be considered too esoteric ear muffs and ear plugs have been widely known at least since the First World War.[41]

'*Was the remedy of which* [*he*] *should have known, for the danger* [*he*] *should have foreseen, one* [*he*] *was entitled to reject as unreasonably expensive and troublesome*?'

While modern methods of insulation and/or isolation of machinery or the rebuilding of workshops may well be 'unreasonably expensive or troublesome' it will not always be so. And the simple protective devices mentioned above cannot be described as either expensive or troublesome.

On the face of it then the impairment of hearing can clearly come within the category of the tort of negligence.

25. Problems of proof

Despite this apparently clear potential liability no such action has been taken. Is there, then, some hidden difficulty in proceeding? If there is I cannot see where it lies though there are certain points which require careful consideration.

First, negligence does not give a right of action unless it was the cause of the injuries or damage sustained. Is there any serious difficulty in proving causality in the case of industrial deafness? It would not appear so. As the greatest of modern judges has said:[42]

'[The] Choice of the real or efficient cause from out of the whole complex of the facts must be made by applying commonsense standards. Causation is to be understood as by the man in the street, and not as either the scientist or the metaphysician would understand it.'

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

In these terms it is difficult to see any serious problems of causality or, at least, any such problem more difficult to surmount than those in the case of any other type of injury. Almost the whole of this meeting so far has been concerned with cause and effect. Even more than this: with the measurement of cause and effect. The impression that such evidence would make on a court is obvious. It must, however, be admitted that certain aspects of the evidence available will still be open to severe criticism. The pure-tone audiometer leaves much scope for subjective error or deliberate misleading. Compensation neurosis may well have new fields to conquer.

Secondly, 'injury' of this kind will seldom occur instantaneously. All the cases mentioned above where deafness was a head of damages were cases in which deafness was a concomitant of brain damage caused by a single act. Deafness in the terms now under consideration is quite different; it is a long-term effect—attrition rather than direct assault.

But this, too, should cause the prospective litigant little trouble. Pneumoconiosis, silicosis and similar lung conditions which are contracted over long periods have never seriously been contested as grounds for personal 'injury'. They are now commonplace. Similarly, progressive skin conditions have caused the courts little trouble from the point of view either of causation or damage. Though there are certain special problems of proof in conditions which are necessarily progressive they can be and repeatedly have been overcome in similar circumstances.

Thirdly, one point that has certainly inhibited actions of the kind envisaged. In *Cartledge* v. *Jopling*[43] the House of Lords held that, under the *Limitation Act* 1939,[44] the time allowed for taking an action for pneumoconiosis ran not from the date when the plaintiff knew, or ought to have known, that he was suffering from the disease but from the date when the cause of action accrued, i.e. when the pneumoconiosis was contracted. Such a decision, which the phraseology of the act made less perverse than it seems on the face of it, clearly raised difficulties for the person suffering from progressive occupational deafness.

But this problem has now been resolved by the *Limitation Act* 1963[45] which was passed purely for the purpose of reversing *Cartledge* v. *Jopling*. Under the new act the plaintiff has twelve months in which to bring this action, starting from the date at which he knew or ought to have known that he was suffering from such a disability.

Finally, by way of difficulty, there may be occasions where more than one cause has to be considered. We live in a noise-producing world and it may well be that the deaf workman has been subjected to noises above the threshold of danger in circumstances other than at work. Once again I can see no serious problem here. Such circumstances have been faced up to with equanimity by the courts too often. Slipped disks suffered 'at work' have been compensated despite the plaintiff's love of gardening.

26. Statutory control of noise negligence

We have seen in §17 that in relation to other problems (motor vehicles, aircraft) statutory control is either ineffective or gives a blessing to noise making. Such control in cases of potential personal injury is rather a different problem.

The Ministry of Social Security has now declared that deafness is to become a

'prescribed disease' under section 55 of the *Industrial Injuries Act* and this will remove one of the worst and most difficult anomalies. We do not yet know when this is to be enacted or on what basis.[46]

27. Specialized protective statutes

At least equally important, though, are the possibilities under the *Factories Act* 1961[47] and the *Offices Shops and Railway Premises Act* 1963[48]. Most employed persons work in premises covered by one or other of these acts and, as both are dedicated to the propagation of safety, health and welfare one would imagine, being recent legislation, that much would be said in them regarding noise.

One would be disappointed.

28. The factories act 1961

This is a large act of 185 sections and seven schedules. Noise is not mentioned in it. Nevertheless, wide powers are vested by the act in the Minister of Labour and if he chose to use them they could do a great deal towards noise suppression.

For instance, section 76(1) states that:

'Where the Minister is satisfied that any manufacture, machinery, plant, equipment, appliance, process or description of manual labour is of such a nature as to cause risk of bodily injury to the persons employed or any class of those persons, he may, subject to the provisions of this Act, make such special regulations as appear to him to be reasonably practicable and to meet the necessity of the case.'

Clearly if prior argument is correct damage to hearing is 'bodily injury' and a valid basis for the making of regulations. Of course no such regulations concerned with noise have yet been made or even proposed.

Even more interesting because more immediate are the possibilities of sections 54 and 55.

Section 54(1) states:

'If on complaint by an inspector a magistrates' court is satisfied either—

(*a*) that any part of the ways, works, machinery, or plant used in a factory is in such condition or is so constructed or is so placed that it cannot be used without risk of bodily injury; or

(*b*) that any process or work is carried on or anything is or has been done in any factory in such a manner as to cause risk of bodily injury;

the court shall, as the case may require, by order—

(i) prohibit the use of that part of the ways, works, machinery or plant, or, if it is capable of repair or alteration, prohibit its use until it is duly repaired or altered; or

(ii) require the occupier to take such steps as may be specified in the order for remedying the danger complained of.'

Clearly 'bodily injury' must include damage to hearing. What is more section 54(2) goes on to give the magistrates power to make an order under the section *ex parte*: i.e. immediately on the complaint of the inspector pending a full hearing.

Section 55(1) states:

'Where a magistrates' court is satisfied on complaint by an inspector that any premises which are or are part of or are intended to be used as a factory are in such condition, or are

so constructed or placed, that any process or work carried on therein, or intended to be carried on therein, cannot be so carried on with due regard to the safety, health and welfare of the persons employed, the court may by order prohibit the use thereof for the purpose of that process or work and, in the case of premises which are intended for use as a factory, the court may make the like order if satisfied on complaint by an inspector that the process or work cannot be carried on therein without a contravention of this Act or a regulation or order made thereunder.'

Clearly, therefore, if the danger of damage to hearing is due to structural defects the magistrates have wide powers though, in this case, only after a full hearing of the case.

The Factory Department of the Ministry of Labour makes very sparing (in the author's opinion *too* sparing) use of those two important sections. No order has ever been asked for on the grounds of the noise generated by a process or by machinery.

It may well be asked what form regulations made under section 76 should take and what the magistrates should require in an order made under section 54 or 55. This is, of course, the point at which the lawyer must give way to other scientists. The only way in which the lawyer can offer positive help is to make it clear that regulations dealing solely with personal protection are a waste of time. Every code of regulations which depends for its effectiveness on the continuous cooperation of the employee has failed in the past. There is no reason to expect any better success in the future.[49]

29. The Offices Shops and Railway Premises Act

When the powers set out in §28 above were given to the minister (and they date back at least to 1901) there can be no doubt that neither Parliament nor the draftsman had any thought that they might be used in respect of noise. Not that that fact in any way, morally or legally, disables the minister from using them for purposes unimagined at the passing of the act. Radioactivity was, I think, virtually unknown in 1901 but this has not prevented regulations being made to deal with its dangers.[50]

But the position with regard to the *Offices Shops and Railway Premises Act* is rather different. Here, for the first time in English statute law, the adverse effects of noise on human beings is specifically acknowledged.

Section 21 (1) states:

'The Minister may make special regulations for protecting persons employed to work in premises to which this Act applies, or any class of such premises, from risks of bodily injury or injury to health arising from noise or vibrations and for preventing the welfare of persons so employed from being adversely affected by noise or vibrations.'

This is obviously quite specific. Unfortunately the section says that minister 'may' make such regulations and he has not yet done so. While no one who has heard some of the more exotic papers presented to this meeting can fail to sympathize with the problem of drawing up such regulations it is to be hoped that something will soon materialize and that it will materialize after consultation with people who can offer worthwhile and concrete suggestions.

Potentially valuable as section 21 no doubt is section 20 is legally much more interesting and, from the point of view of noise suppression, much more exciting. To make my point clear I must, I am afraid, quote quite a lot of the section.

Subsection (1) states:

'The Minister may, as respects premises to which this Act applies or any class of such premises, make special regulations for protecting persons, or persons of any class, working in such premises or, as the case may be, in such premises of the class to which the regulations apply, against risks of bodily injury or injury to health arising out of the use of any machinery, plant, equipment, appliance or substance, the carrying on of any operation or the use of any process.'

As will be seen this subsection is phrased in much the same terms as section 76(1) of the Factories Act 1961.

Subsection (2) then continues:

'Regulations under this section may make any such provision for the purpose aforesaid as appears to the Minister to meet the necessity of the case so far as is reasonably practicable, and may impose obligations, restrictions and prohibitions on those who employ persons to work as aforesaid, on persons employed so to work, and on others.'

This subsection gives wide powers to the Minister to do almost anything and then subsection (3(*b*)) goes on:

'Without prejudice to the generality of the last foregoing subsection, regulations under this section may provide for—

...(*b*) imposing requirements with respect to the construction, installation, examination, repair, maintenance, alteration, adjustment, and testing of machinery, plant, equipment or appliances and the safeguarding of dangerous parts thereof;...'

The net effect of these subsections is to give the Minister wide powers over, *inter alia*, the construction, type and installation of machinery in premises covered by the act. *But* in addition to this subsection (10) has a most important proviso:

'So far as regards machinery, plant, equipment or appliances, nothing in this section shall be construed as restricting the exercise of the powers thereby conferred to the making of provisions with respect to machinery, plant, equipment or appliances wholly situate in premises to which this Act applies.'

This subsection appears to mean that the Minister may make regulations under the section as a whole and, by virtue of subsection (10), extend the provisions of the regulations to machinery which is not necessarily going to be used in premises to which the act applies. In other words, the Minister could claim an almost general power under the section extending far beyond the confines of offices, shops or railway premises.[51]

30. Conclusions

1. (*a*) In the field of loss of amenity and to a limited extent in the case of personal injury the existing law of nuisance is adequate to deal with most noise problems.

(*b*) Some additional legislation may be necessary in respect of aircraft and motor vehicles. This legislation should be preventative rather than punitive and cannot be effective until the other sciences can offer simple and accurate methods of measurement that will stand up to the rightly stringent enquiries of a court of law.

(*c*) The existing law of negligence already offers adequate legal remedies for personal

injuries resulting in the impairment of hearing. It is not being used and it ought to be. In passing, I suggest that the Trades Unions are not perhaps operating as smoothly as they might on behalf of their members here.

(*d*) The existing potential statutory control over noise in workplaces is enormous if the Minister cares to use his powers. Pressures should obviously be brought to bear on him to do so.

2. The aggregate implication of (*a*) to (*d*) above is that, with one or two exceptions there is, as I stated at the beginning of this paper, plenty of law. It is simply not being used. Government departments, local authorities, trades unions and private individuals are equally to blame. Why is this? Loss of sight invariably results in hasty legal action. Why should loss of hearing not do so?

The reasons are, of course, social ones. Deafness is not yet understood as a major social disaster. Blindness breeds sympathy and help; deafness breeds ostracism. There are still hundreds of 'uneducable deaf-mutes' in psychiatric hospitals in Britain. Deaf they may be, mute seldom and uneducable never.

Not for the first time the law has shown itself to be ahead of public opinion. Perhaps in the near future our society will become civilized enough to make use of the procedures the law already offers and even to extend and improve them.

Notes

(1) III, 2, 426.
(2) III, 13, 435.
(3) *Per* Denning, L. J. in *Southport Corporation* v. *Esso Petroleum Ltd.* [1954], 2 Q.B. 182 at p. 196.
(4) *Attorney-General* v. *P.Y.E. Quarries Ltd.* [1957], 1 All E.R. 894.
(5) *Walter* v. *Selfe* (1851), 4 De G. and Sm. 315 *per* Knight-Bruce V-C at p. 322.
(6) *per* Theisiger L.J. in *Sturges* v. *Bridgman* (1879), 11 Ch.D. 865.
(7) 68, 8 and 9 Eliz. 2.
(8) 25 Geo. 5 and 1 Edw. 8, C. 49.
(9) Salmond, on *Torts*, 14th edition, pp. 192–197.
(10) *Herr* v. *Central Kentucky Lunatic Asylum* 1895, 97 Kt 458.
(11) *Stephens* v. *Rockport Granite Co.* 1914, 216 Mass 486.
(12) *Per* Lord Denning *Morton* v. *Wheeler*, *The Times*, 1 Feb. 1956.
(13) [1893], 1 Ch. 316.
(14) *Per* Eve J., in *Hulley* v. *Silversprings Bleaching Co.* [1922], 268 at p. 281.
(15) *Leacock* v. *Thorpe* (1965), 9 W.I.R. 133.
(16) *Dewell* v. *Sanders* (1618), Cro. Jac. 490.
(17) See 'The nature of an easement', by A. J. McClean, 1966, *Can. Bar Rev.*
(18) Many of the cases where 'ignorance' has been held to be a defence smack too much of negligence to be considered as true nuisance cases. A genuine example is, perhaps, *Lambert* v. *Lowestoft Corporation* [1901], 1 Q.B. 590, where a sewer under a highway collapsed. In an action based on nuisance it was shown that the collapse was due to work of rats. The authority was held not liable. I am doubtful if the same decision would be arrived at today.
(19) *Hammersmith Railway* v. *Brand* (1869), L.R. 4 H.L. 171.
(20) *Jones* v. *Festiniog Rly.* (1868), L.R. 3 Q.B. 733. Though it must be pointed out here that fire raising has always been considered something of a special case.
(21) *R.* v. *Rosewell* (1699), 2 Salk. 459.
(22) See Scrutton, L.J. in *Job Edwards* v. *Birmingham Navigations* [1924], 1 K.B. 341 at p. 356.
(23) Winfield, *Tort*, 7th edition, p. 101.
(24) *Attorney-General* v. *Nottingham Corporation* [1904], 1 Ch. 673.
(25) 2 and 3 Vict., C. 71.
(26) 23 and 24 Geo. 5, C. 51.
(27) *Hall* v. *Beckenham Corporation* [1949], 1 K.B. 716.
(28) 5 and 6 Eliz. 2, C. 40.
(29) For example: *Regn.* 21. 'Every vehicle. . .shall be fitted with a silencer *suitable and sufficient* for reducing *as far as may be reasonable* the noise. . . .'

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

(30) 12, 13 and 14 Geo. 6, C. 67.
(31) See an interesting paper by Richards and Caplan in *Jl. R. Aero. Soc.* 68.
(32) Just in case the reader does not believe that the courts will really indulge in such semantic extravaganzas see *Summers* (*John*) *Ltd.* v. *Frost* [1955], A.C. 740.
(33) [1947], K.B. 377.
(34) *Civil Aviation Act* 1949, section 40, subsections (1) and (2).
(35) *Blyth* v. *Birmingham Waterworks Co.* (1856), 11 Ex 781 *per* Alderson B, at p. 784.
(36) A further attempt at classification which I quote purely from pleasure in its language is that of Lord Macmillan in *Glasgow Corporation* v. *Muir* [1943], A.C. 448: 'The standard of foresight of the reasonable man is in one sense an impersonal test. It eliminates the personal equation and is independent of the idiosyncrasies of the particular person whose conduct is in question. Some persons are unduly timorous and imagine every path beset with lions; others, of more robust temperament, fail to forsee or nonchalantly disregard even the most obvious dangers. The reasonable man is presumed to be free both from over-apprehension and from over-confidence.' I am not sure that this means anything but it sounds magnificent.
(37) Callan J. in *Fletcher Construction Co. Ltd.* v. *Webster* [1948], N.Z.L.R. 514 at p. 518.
(38) *Donoghue* v. *Stevenson* [1932], A.C. 562.
(39) Three fairly recent unreported cases show that the courts find no difficulty in allowing damages for deafness in conjunction with other injuries. In *Haley* v. *London Electricity Board* (*The Times*, 27 March 1965) £1000 damages were awarded specifically for deafness as one of various heads of damages. In *Foster* v. *Tickle*, C.A. 18. 11. 63, deafness in one ear was regarded as a good cause of action, the judge saying: 'In addition to having sustained the serious injuries to which I have referred [the plaintiff] is practically completely deaf in his left ear and has difficulty in hearing in his right ear.' See also *McGettigan* v. *Balfour Beatty and Co. Ltd.*, Q.B.D. London 11. 5. 54.
(40) *Per* Pitney V-C in *Gilborough* v. *West Side Amusement Co.* 64, N.J.Eq. 27 1903.
(41) My reservations on such methods of physical protection are set out at §28 *post*. They do not affect the point being made.
(42) *Yorkshire Dale Steamship Co. Ltd.* v. *Minister of War Transport* [1942], A.C. 691 *per* Lord Wright at p. 706.
(43) *Careledge* v. *E. Jopling* & *Sons Ltd.* [1963], 1 All E.R. 341.
(44) 2 and 3 Geo. 6, C. 21.
(45) 1963, C. 47.
(46) The present position under the Act, though one hopes in the light of the Minister's assurances soon to be academic, is so fascinating that it is almost a pity that it is to be resolved. It shows that the Tribunals' attitude to statutory interpretation is at least as bad as that of the judges. Benefit is at present payable in respect of personal injury '*by accident* arising out of and in the course of' insurable employment and the word 'accident' has given the Commissioners scope for a semantic orgy. What, they ask, is the distinction between a series or sequence of 'accidents' and a 'process'? So a tribunal of commissioners actually said (CI 83/50): 'The question of whether a series of incidents should be regarded as falling within the category of accident or within that of process depends upon the comparative continuity of the incidents constituting the series rather than on the duration of the whole series.' I should love to know what this means!
(47) 9 and 10 Eliz 2, Ch. 34.
(48) 1963, Ch. 41.
(49) The classic example of this failure is the Protection of Eyes regulations. I visited a small back street foundry in Birmingham in 1951 as a Factory Inspector and found two men working on a double-ended pedestal grinding machine. One was wearing goggles and the other not. I pointed out to the man without goggles that his mate was wearing them. His reply was 'Ah yes: but he's got to. The poor . . . lost an eye last year. You can't expect him to risk the other one can you?'
(50) E.g. *Ionising Radiations* (*Sealed Sources*) *Regulations* 1961 (SI 1961, No. 1470).
(51) In fairness it must be pointed out that the arguments based on subsection 10 of section 20 are highly controversial though I believe them to be valid. *Contra* one might offer: (i) This was never intended. (Though the courts have never worried over-much about parliamentary intention!) (ii) The actual words of subsection 10 do not mean this. (iii) That as noise and vibration are dealt with in section 21 they are therefore excluded from consideration in regulations made under section 20. These points are, thank goodness, much too technical to discuss in a paper of this kind.

PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES