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### Computer Hacking - The Scottish Dimension

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**Abstract:** The connection between the Law of Scotland and that of continental Europe is noted. The Jurisprudential and Historical background of the Law in Europe is examined as a background against which Computer Law should be studied. Delict and the Civilian concept of unjustified enrichment are discussed. The Criminal Law of Scotland is treated first in outline and then in detail on specific issues. The Roman model for unauthorised use of property is then considered. Finally aspects of law, from a variety of sources, are outlined as possible indications of the nature of future legislation.

#### 1. Introduction

Scots Law is not merely different from English Law - it is fundamentally different. Too often the real nature of the difference is obscured by the twin factors that the two systems have often achieved a similarity of result by different routes and that much statute law is common to both countries. Yet, the necessity to achieve commonality within Europe requires that a fresh look be taken at the Scottish system, which may be a minority system within Britain but, in the Nineties, is very much a part of the majority European legal tradition. The English practitioner may find himself dealing with Jurists whose process of ratiocination owes nothing to that punctilious regard for detail which is the hallmark of the English Common Lawyer. The logic of the European Lawyer can only be properly understood by someone who first understands the Roman concept of Law. While this may appear to be a daunting task for all but Latin scholars or the truly bilingual, it may be timely to remind ourselves that Scotland, in common with the rest of Europe, is a Civilian system rooted in the Digest and Code of the Roman Emperors Gaius and Justinian. Nor should one dismiss such references as being in the nature of archaic history. The reality is that there is no special branch of the Law which we can term "Computer Law". Indeed, at the Computer Law and Technology Conference organised by the Society for Computers and Law in November 1989, the principal speakers appeared united in pointing out that the trick, for the "Computer Lawyer", is to apply already acquired knowledge to new situations. In short, we should be prepared to learn from the past experience of others, rather than to assume that we have uncovered some new legal issue, undreamt of in earlier philosophies.

#### 2. A Background of Jurisprudence

How far we appear to have drifted from the theory of law was demonstrated by the case of *R. -v- Gold and Schifreen* [1988] 2.A.E.R. 186. In this celebrated case Lord Lane (C.J.) indicated that an attempt to force the circumstances into the language of an Act, designed to fit forgery and

counterfeiting, was "procrustean". This exercise in semantics does not seem to be improved by an attempt to strike at hacking by using legislation aimed at the theft of electricity, as has been: mooted in a series of articles dating from August 1986 (in the New Law Journal of that month). Is not the central issue rather; to establish what is in the best interests of society? It seems arrogant to discount the wisdom of the ages and yet, by ignoring the works of the great legal philosophers, that is, precisely what we are doing. According to Ihering, the paramount necessity of the law is to serve social purpose. Friedmann suggested that the law considers only the good of society. Bentham, a forerunner of the Austin analytical school, referred to the greatest good of the greatest number. Demosthenes held that the object of the law is to ascertain what is just, honourable and expedient. Justinian pronounced the three fundamental precepts as being to live honourably, hurt no-one and to render each his due. The list goes on but the essential message, as we approach the millennium, is that we must never fail to consider the best interests of society. With respect to those undeniably gifted hackers who can demonstrate that the closed system has yet to be devised, I cannot see that to permit electronic "Peeping Tommery" is remotely close to being in the best interests of the public at large. The greater number would surely prefer that the activities of the few be curbed at law. While we all revel in an illicit peep through the keyhole, we are outraged if the keyhole should be our own.

### 3. The Historical Relevance of Roman Law

It has never been denied but that the Romans built well. More lasting by far than their architectural design, however, has been the system of law we now refer to as the Civilian System. Its influence has shaped European legal thinking and its relevance can be, to the uninitiated, quite astonishing. Roman Law was a codified system which, having been built up over a lengthy period, provided a body of law so comprehensive that the Lex Aquilia, for example, in translation bears a striking resemblance to the most modern treatments of the law of corporeal property. The highly influential Napoleonic Code drew heavily on its Roman ancestry as did the central European Reichshaftpflichtgesetz of 1871. Modern Codes which rely on the Roman model are the French, Austrian, Italian, Belgian and Swiss Codes. Even the Soviet Civil Code contains elements which are of identifiable Roman origin. Scotland is, to some extent, the odd man out in that Scots Law is not codified but, in Scotland, there are the Institutional Writings of such as: Erskine, Stair and Hume. These works are held to be the definitive statements of Scots Law unless Parliament or the Courts have decreed otherwise and, being authoritative, they form a sort of informal Code. This reliance on text is not completely unique to Scotland and there was, in central Europe, the Pandektist School which advocated an almost pure Roman system and whose works, such as Lehrbuch des Pandektenrechts by Windscheid, played a significant role at a time when the European Codes were less highly developed than in modern times. Scotland, of course, had strong links with Europe and could not help but be influenced by the Roman tradition - to the extent that there is now no trace of the original Primitive Law of Scotland. Scotland remains the only country which has a Roman based legal system and yet was colonised neither by the Romans nor a Roman influenced country, such as Holland, France or Spain.

### 4. Delict.

Against this historical background, we can look at legal issues which might affect the hacker. First of all, is there a civil wrong? More importantly, is there a compensatable wrong? The Roman concept of reparation is summed up in the phrase "damnum injuria datum", which is to say that a right of compensation arises if there is loss following a legal wrong and there is a chain of causation establishing a link between the wrong, which need not be criminal, and the loss. This wrong, referred to as a Delict, is not subdivided, as is the case with the English Tort where there is, for example, the Tort of Negligence with its emphasis on the establishment of a legal duty of care. There are undeniable similarities in practice between the Delictual concept of "Culpa", or blame, and the Tortious concept of negligence. This is less than surprising given the fact that the leading case on

negligence is the Scottish "snail in bottle" case of *Donoghue -v- Stevenson* [1932] A.C. 562. The English test is whether or not the loss is foreseeable and, if it is so, then there is a duty of care. This is the "neighbourly" duty to someone defined by Lord Atkin as being so closely and directly affected by an act that this ought reasonably to have been in contemplation. The difficulties arise, however, when the harm results from use of the alleged Tort-feasor's own property. In *Bradford -v- Pickles* [1895] A.C. 587 it was clearly established that one cannot be in breach of duty if one is exercising a right. This was never the Scots Law, despite an unwarranted Judicial assumption that it was, and the Scottish position was fairly well confirmed in *Campbell -v- Muir* 1908 S.C. 387. In Scotland, it is a civil wrong to exercise a right in a manner calculated to cause nuisance or annoyance - an act "in aemulationem vicini" or, literally, in malice of one's neighbour - and this is consistent with the Roman concept of *Culpa*, which today is used as if it meant blame whereas originally it meant moral fault. It is, in truth, the concept of *Culpa* which is central to an understanding of *Delict*. Pomponius recorded that it was blameworthy to meddle with something belonging to another but it was also clear, from the Institutes of Justinian, that an individual could mishandle his own property and thereby commit a civil wrong. Justinian quotes the example, reported by Quintus Mucius, of the man who lopped a branch off his tree, under which there happened then to be an innocent passer-by. There is an emphasis, as with English Law, on foreseeability but not the same need to identify a specific duty. Ulpian, commenting on the *Lex Aquilia*, wrote that the slightest degree of blame would give rise to a claim and in the context of his writings, and those of Gaius and Celsus, it seems quite clear that the standard is that of moral blameworthiness. English Common Law, however, distinguishes moral from legal wrongs. In the European systems, the influence of Canon Law appears to have reinforced this "moral" aspect. It is clear, therefore, that the negligent or careless hacker will not, in a Civilian system, be able to indulge in legal semantics and try to argue that he is not in breach of any particular duty. If society finds his conduct reprehensible then any damage caused could result in a civil claim. Deliberate damage is clearly delictual but accidentally entering someone else's system, without negligence, and causing unwitting damage is not. Whatever may be the position in England, the classic Scottish concept of *delict* can arguably be stated as being that the act of hacking itself is morally reprehensible and, therefore, "wrong" in the legal sense. Damage must surely be foreseeable in that the very nature of hacking requires that security systems be bypassed with an increase of risk. It might even be argued that the cost of checking for a virus "plant" might be foreseeable. The other factor is, of course, that you cannot hack into any system without using, to some extent, the data holder's hardware and it is hard to see what "right" a hacker can have to use that property. In Scotland, every person has the duty to respect the rights of others and, bluntly, failure so to do is very much at the peril of the "moral miscreant".

## 5. Unjustified Enrichment

In addition to *Delict*, which applies both to careless and deliberate acts, there are other types of hacking where there is less a question damage than a question of profit. Fraud is fraud - whether it occurs in a Common Law or a Civilian system - and it is evident that the defrauded can always recover their losses from the solvent culprit. Nor, in Scotland, do we have the English problem of "tracing" funds. The Roman concept of the "*condictio indebiti*" merely directs that money paid in error must be repaid. What, however, of the hacker who stumbles on potentially profitable information? The Data Protection Act 1984 is primarily concerned with criminal sanctions against the careless custodians of data. In any event, we do not assume that the individual who leaves his house unlocked has no civil right of redress against the thief. One cannot, of course, "steal" incorporeal property and we must consider the position of the hacker who uses his "talents" to obtain information which will enable him to line his own pockets. The Roman maxim, "*Nemo debet locupletari ex aliena jactura*," appears not merely in Gaius and Justinian but in Scottish cases from *Somerville -v- Hamilton* (1541) Mor. 8905 to the more recent *Cantiere San Roco -v- Clyde Shipbuilding Co.* 1923 S.C. (H.L.) 105. It is not the making of profit which is important, rather it is the fact that the enrichment is at the expense of another. There is no need to establish a contractual relationship or specific duty and the remedy is based on the concepts of fairness and natural justice.

The original Roman Law required little more than that one man make a loss and that the other be the gainer by that loss. This concept was treated by Bell, the Institutional Writer, as meaning that in Scotland, there is an obligation to compensate if one man gains by the lawful act of another, without their having been any intention of donation. Patently, this was too sweeping a generalisation to be a complete definition and Lord President Inglis in *Stewart -v- Steuart* (1878) 6 R. ventured the opinion that the yardstick was whether or not there was loss, without intention of gift and not attributable to an operation carried out by the loser for his own benefit (this to cover the situation where the loser has made a bad bargain). He also commented that the principle of unjustified enrichment should provide an equitable legal solution but only where no other remedy is available. It is worth observing that such opinions of learned Judges, *Obiter Dicta*, are regarded as persuasive precedent - particularly if unchallenged in subsequent cases. In the City, vast amounts of financial data are stored which could make a fortune for the possessor. A financial institution which painstakingly gathers information for a "financial killing" might well wish to plead unjustified enrichment if a rival were to tap the database and pre-empt the proposed deal. The "hacking" might even be accidental in the case of someone entering a partially open system. It would be a brave man who would forecast the outcome of any application to the courts for an equitable remedy but the existence of an equitable remedy must be acknowledged.

## **6. The Effect of U.K. Law.**

There are, of course, types of civil claim and criminal prosecution which derive from statute common to Scotland and England. It is not the purpose of this paper to deal with these but it ought to be stressed that such common ground often serves to conceal true and fundamental differences. The Copyright Designs and Patents Act 1988, the Data Protection Act 1984 and the provisions dealing with insider dealings, as most recently set out in the Companies Act 1989, are all matters of U.K. Law. With hacking, and its cross-frontier implications, uniformity is desirable but this should not blind us to the reality that, today, we are more concerned with uniformity within Europe. Legislative change should, therefore, be made with one eye to the type of enactment which may emerge from a legislature trained in the Roman tradition and where, accordingly, the emphasis is likely to be more on the general concept of fair play than on the attention to detail which has characterised much modern legislation. Undue attention to detail has, regrettably, resulted in not a few staggering anomalies in recent years.

## **7. Scottish Criminal Law.**

It is in the field of Criminal Law that the most dramatic differences between the two systems occur. In Scotland, there is no distinction between crimes and offences and this derives from the Roman approach which merely asks if a particular type of conduct is contrary to public interest. Some types of conduct have been stated by our elected representatives as being contrary to public interest, other types have been so held by Baron Hume, the Institutional Writer, while yet others have been pronounced criminal in the courts. This broad legal database leads the Scots lawyer to wonder why his English colleague is so reliant on Acts of Parliament to tell him, for example, what theft is. Before looking at the individual categories of criminal activity, it may be well to remind a predominantly English audience that from the Roman traditions of Scots Law have emerged such important doctrines as that of Diminished Responsibility. In addition, we have managed to avoid the more elephantine displays of legal majesty, such as the court which solemnly fined a young lady in Brighton the sum of one farthing for bathing, contrary to a local byelaw, attired in a bikini instead of the prescribed one piece, neck to ankle, garment.

## **8. The Innominate Crime.**

At the outset it must be stated that, in Scotland, the *nomen juris*, the name of the law, is quite irrelevant. In England it may be important to identify the alleged wrong as being, say, theft, forgery or theft of electricity but Scots Law suggests that the contents of the package are more important than the label. To be sure, there are recognised criminal activities but lack of a name has never been a bar to prosecution. A parallel is often drawn with "joy-riding" where the English solution was to look at the options of theft of petrol and "furious riding" until the early road traffic legislation stepped in with the offence of taking a vehicle without permission. In *Strathern -v- Seaforth* 1926 J.C. 100 it was held that here there was clearly a criminal act, which the accused knew, or ought to have known was criminal, and which was no less criminal for not having a specific name. The Common Law purist may view this as a crime created at the whim of the bench but this is to misunderstand the whole basis of the law. Firstly, the court does not "create" a crime - it merely recognises the crime as already existing - and secondly this discretion of the court is but sparingly exercised and then only by the Court of Justiciary. There is always an identifiable thread of "public interest". In *Khaliq and others -v- H.M.A.* 1984 S.L.T. 137 the charge was that shopkeepers had made up, and sold to young persons, packets containing tubes of glue and plastic bags. These, patently, were for use as "glue-sniffing kits". It was not an offence to sell glue or plastic bags to children and it has never been suggested that a shopkeeper is responsible for the use made of his wares. What is suggested is that the sale of such a kit, with only one conceivable purpose, is contrary to public interest. The shopkeeper knew that it was irresponsible but, *ignorantia juris neminem excusat*, ought also to have known that such a sale was so contrary to public interest as to be a criminal wrong. The relevance of the innominate crime to hacking was clearly demonstrated by Dewar's case (1777 Hume i 75). Consider a situation where a trainee manages to crack his employer's computer security system and takes a "floppy" home to read on his own equipment at leisure. The disc contains highly confidential trade secrets and he knows that permission would have been refused. He is surely irresponsible, since doubtless he would resent someone else reading his own personal papers, but is he a criminal? Is there a difference between this and the case of young Dewar who managed to extricate his master's book of trade secrets from its lockfast place and took it home to read? He was found guilty of an action so contrary to public interest that it clearly constituted a criminal wrong. The crime was not breaking and entering nor was it theft. Other cases were less clear and Bell, the Institutional Writer, described the case of John Deuchars in 1834 who pled guilty in circumstances where he had broken in and "borrowed" a book. It was not, in truth, clear as to the charge to which he was pleading guilty. In *H.M.A. -V- Mackenzies* (1913) 7 Adam 189, the accused was found not guilty of charges involving the copying of trade secrets but that was on the basis that the activity appeared to be the preparation for a crime rather than the crime itself. It is clear from this body of law that stealing incorporeal property is not theft but that a crime may be committed if the general public interest is at stake and no other criminal sanction presents itself. In Scotland, as in England, the only references to theft of incorporeal property are to be found in statutes relating to use of energy (i.e. gas, electricity and atomic or nuclear power) and it is, respectfully, submitted that the time is overdue for some clarification of what might be termed the "theft of intellectual property". The last word on this topic should rest with the Lord Justice Clerk in *Strathern's* case who used a telling phrase in considering the nature of the type of conduct which might be in the nature of an un-named crime - he said that the law could not permit an activity, if to allow it would be "lamentable but absurd".

## 9. Theft of Intellectual Property.

It cannot be said that the Roman law of *furtum usus*, the clandestine use of the property of another, is part of the law of Scotland. Nonetheless, the principle therein enshrined is an interesting one. The criterion in the *Corpus Juris*, according to Jolowicz [*De Furtis* lviii -lxi], was the intention to exploit the thing against the will of the owner. This was clearly seen as a wrong and the European lawyer, while conceding that the modern codes have neglected this aspect of the Roman Law, must still be comfortable with the idea that the clandestine use of property is to be discouraged by the operation of law if self regulation is ineffective. The approach of the English Common Law is merely to stop at

the phrase, "Borrowing is not a crime". Anything beyond that phrase would be a startling innovation. "Theft of use" has been considered not merely in Strathern's case but in Murray -v Robertson 1927 J.C. 1 and, more recently, Milne -v- Tudhope 1981 J.C. 53. Modern Scots Law is stated in all the standard texts as being that the taking of clandestine possession and the using of the property of another, in the knowledge that permission would be refused, can constitute a crime. Each case would have to be taken on its merits but the merits of hacking are an as yet unknown quantity. The term "property" can mean not only the thing itself but rights in the thing. The Copyright etc. Act, already referred to, classifies software as more or less equivalent to literary work and, since the law demands consistency, it seems clear that data is "property". It is submitted, to be fair not entirely without reservation, that transient use of someone else's data is so similar to the use of corporeal property that there is an argument for stating that, even without Dewar, hacking might be in the nature of a crime. This would be the use, not strictly theft, of intellectual property. The other point, of course, is that hacking, of necessity, involves unauthorised use of the hardware at both ends of the telecom link. Is this the taking of possession? There is no clear authority on this point and I can well see that the courts would have some difficulty in dealing with the situation where someone uses without "taking". I adhere to the view that a test case is overdue -though such a case may become redundant if sensible legislation can but find its way onto the statute books.

## **10. Theft of Printout.**

Here, we have a fascinating and modern case. The Court of Justiciary rejected the case against Neil Buchan Grant in an Appeal Hearing (1988 S.L.T. 11) but it was the manner of rejection which was interesting. Grant, in course of his employment, took possession of a printout which he then attempted to use by selling the confidential information therein contained to a trade rival. The Sheriff had favoured a "Dewar" type argument but felt obliged to remit the matter to the Court of Justiciary for a ruling. Grant appealed to that Court that the charges were irrelevant and in that appeal he was successful. The Lord Justice Clerk and his colleagues on the Bench clearly found difficulty with the report on Dewar - not surprising as the reason for a finding of guilt in that case was not as clear as might be found in a modern report. One of the charges against Grant was dropped because, on analysis, the charge amounted to preparation for a crime. It is easy to read too much into such a finding but there is a question here in that while the Court accepted that a crime was in contemplation they did not indicate which crime it might be. It could not have been theft, that much seems clear, nor does it seem that fraud was in the collective mind of the Bench. The second charge was dismissed because the Court decided that the dishonest exploitation of confidential information is not a crime nor did the Court wish to declare it so. It was found that Grant was entitled, in course of his employment, to make a copy but that this copy remained the property of the employer. Was this the crime in contemplation - the unlawful sale of the employers hard copy? A careful reading of the judgement brings out the feature that "away-taking", without authority, was missing as an essential element but had been present with Dewar (who took the book away to copy it). Further, it seems to have been regarded as significant that there was a clear civil remedy for breach of the employment contract, whereas this was not a factor in Dewar's case. Perhaps it is significant that Grant was at perfect liberty to take the printout home but not to disclose trade secrets, whereas Dewar had no right to take the book home and it was never suggested that he intended any improper use of the trade secrets. We are left, therefore, with the premise that a printout, if taken, can be the ordinary theft of corporeal property but study of the Judgement suggests that the Court were not sanctioning the clandestine taking of data by unauthorised persons. I remain of the view that such an activity merits the attention of the criminal courts.

## **11. Malicious Mischief**

The traditional definition of property includes both corporeal and incorporeal property and there is nothing to indicate that malicious mischief is restricted to corporeal property. The reported cases,

such as *Forbes -v- Ross* (1898) 25R (J) 60, certainly deal with corporeal property but the cardinal feature appears to be the presence of some evil intention such as malice. The will to cause harm seems evident in the planting of a virus. Even if there is indifference or disregard for the rights of others this may be equivalent to a wicked intent, as was observed by the Lord Justice Clerk in *Ward -v- Robertson* [1938 J.C. 32]. Again the concept of conduct inconsistent with the best interests of society may strike at the hacker who behaves with cavalier disregard for the system with which he is tampering.

## **12. Modern Applications of the Criminal Law**

The primary model for legislative change must be the United States where Federal "Hack Attack" legislation is fairly well developed. As far back as 1984 there was the Counterfeit Access Device and Computer Fraud and Abuse Act. Since then, loopholes have been noted and, with varying degrees of success, closed by the Computer Fraud and Abuse Act 1986. There is also a welter of State legislation such as that of Minnesota where implant of computer virus carries a term of 10 years. Equally significant, in a computer dependent society, has been a plethora of "Big Buck" civil actions raised by such as Sprint (*Sprint -v- Syal* etc.). The E.C. as a whole seems reluctant to add a new category of crime to the books but this perspective may change. The article by Guy Vandenberghe in the *Computer Law and Security Report* [Vol 5(2) 1989] demonstrates the importance of computer security standards but this is only part of the story. Member States, particularly Holland, Belgium and the U.K. have been looking to the possibility of computer abuse as a crime. The difference in approach, as between the U.K. and other member states, may well be that the Roman tradition does not balk at the idea of a crime being something which is contrary to public interest and this could lead to more sweeping legislation than is in prospect on this side of the Channel.

## **13. Euro-Roman Applications of the Civil Law**

Civil Law is of particular importance in that closer commercial cooperation with other member states is bound to involve legal issues where the prevailing law is that of another Member State. While this paper is concerned with hacking, the reader would be well advised to remember that the same principles of law apply to other subject areas. Even where there is specific legislation built onto the traditional law, as in, say, product liability, the basic Euro-Roman framework is largely unaltered. Within the text of one single paper, the existence of a Roman framework can only be demonstrated by a cursory examination of one subject area but, on the premise that hacking carries a risk of damage to the system being accessed, it seems a relevant research strategy to look at the European concept of blame. In, for example, the French Court of Colmar in 1855, liability was established where a man built a chimney for the sole purpose of spoiling his neighbour's view - a classic example of the French concept of the "abus de droit" similar to the Scots Law of *aemulatio*. The *Schikaneverbot* of the German Civil Code refers to the spiteful causing of harm in the exercise of a right, with no tangible benefit to the exerciser. The Swiss Civil Code refers to good faith in the exercise of a right and to the need to avoid abusing rights. The Soviet Code indicates, according to J.N. Hazard [*Materials on Soviet Law*], that civil rights are not protected unless exercised for their economic and social purpose. Stretching the definition of "European System" to include the Quebec Civil Code, we find that it says that an individual who causes damage is liable whether the damage be caused by positive act, imprudence, neglect or want of skill. The Italian Civil Code provides that everyone is responsible for the things he has in his care unless he proves inevitable accident. These examples all make the point that the onus of proof has shifted well away from the establishment of a duty of care. In brief there is, undeniably, a pattern requiring all individuals, including hackers, not to act *contra bonos mores*.

## **14. Conclusion.**

The broad conclusion must be that the identifiably Roman concept of Justice is likely to influence legal thinking in this decade and it therefore behoves the minority English system to increase its understanding. Where better to start than with a Roman system written in English? The point is not to ascertain which system is the better but rather it is that, since Computer Law is largely a re-working of traditional concepts and since Euro-Roman Law is the majority system, a study of Scots Law seems an inescapable requirement for the true English speaking European with an interest in Computers and the Law.

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In addition to the works specifically mentioned in the text, the undernoted are recommended for further or more detailed reading and have been drawn upon heavily by the reader of this paper.

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