

LEGOL AND THE ELECTRONIC HOME LAWYER

LEGOL, a linguistic system being developed at the London School of Economics, points the way to provision of a home legal information facility. Almost every British home now possesses a one-way electronic device known as a TV set. Soon almost every British home will also possess a two-way electronic device of a similar kind (some already do). This will be not just a receiver of signals, but a transmitter too. It will enable the householder to engage in dialogue with entities outside. The telephone does that, but its user needs someone else at the other end. This device will be linked only to computer programs and computer-stored information. It will answer the householder's requests for information, whether of a general kind or related to him personally, by a response in oral form (using voice-simulation techniques), or in transient written form (words on a TV-type screen), or in permanent written form (by means of a built-in printer).

The present facilities

We are already some way towards this position. A small proportion of householders possess Prestel sets using a British Telecom service linked to the telephone network. They can bring up on their screens information prepared by specialist companies. In the case of legal information this mostly consists of brief summaries of recent Acts and cases, and does not claim to be self-sufficient even for lawyers. More ambitious are services like Lexis and Eurolex, which offer full-text retrieval. Useful as these are, they provide no more information than already exists in printed form (even if much of it may be difficult and time-consuming to find without this aid). In no way do any of these facilities displace the need for legal expertise on the part of the user. To understand how LEGOL and similar projects might in the end achieve this displacement, we need first to consider briefly the nature of the expertise, and why at present it is needed.

Law consists of a large number of verbal formulations. Some of these are commands made by, or under the authority of, Parliament. Some are specific expositions delivered by judges in relation to cases in court. Some are general expositions by text writers. All share one attribute. The person who wishes to understand and apply them needs special knowledge and skill to enable him to do so correctly. He needs an expertise to know which are the relevant texts, and how to find them. He needs an expertise to evaluate the texts, so that he can assess the authority and weight to be attached to each. He needs an expertise to interpret them, and to reconcile them when they are inconsistent. Finally he needs an expertise to cope with problems that too-frequently arise when in the end the texts do not supply a clear-cut answer.

LEGOL confronts all these tasks. If its ultimate aim is achieved, many of them will become superfluous. Others the citizen will be able to perform by himself, without need of an expertise.

The LEGOL project

The research project known as LEGOL began in 1974. Its origins lie outside the law, in the investigation of problems of computer application in the field of administration. It draws upon various disciplines relating to logic, language and computing. Ronald Stamper, in charge of the project since its inception, is a systems analyst. The close connection of statute law with many types of administrative system quickly led his research team to direct attention to that topic. The project then became inter-disciplinary. Problems of terminology arose.

In Britain, if not elsewhere, law has traditionally been regarded (at least by lawyers) as a branch of the liberal arts. Lawyers dislike jargon when it is not their own. Particularly do they dislike the new-fangled

jargon of the social sciences. Add the complications of computer language (with which LEGOL is necessarily involved) and you have a prospect from which many lawyers will want to avert their gaze. That is why this article, addressed to lawyers, seeks to explain the LEGOL project (so far as it concerns the drafting of legislation) while avoiding its jargon.

The aim of this area of the project is to help the legislative draftsman ensure that his draft is complete, free from error, and logically consistent. Only then can it be capable of application by computer technology in a dynamic (that is interactive) way. The problem lies not so much in the form in which a particular item of legislation is expressed as in the content of the ideas it seeks to convey. A scheme intended for computer operation must be precise in its thinking. Once the computer goes beyond the mere function of reproducing what is contained in law libraries already (which is all the present retrieval systems do) we must replace woolly legislative notions with exact concepts. Only then can the amazing speed of the computer (its only virtue) come to our aid in a positive way.

Next, having designed a precise legislative scheme, it is necessary to ensure that the legal environment it is to operate within is equally precise. A component placed in an engine cannot work more effectively than the whole engine. Here we encounter a familiar difficulty of law reform. There is no way of reforming the whole legal system at one time. The worn-out engine of a car can be taken out and replaced in one operation by a new engine. With the legal system we may put in a new sparking plug, or even a new carburettor. What we cannot do is equip the system with a wholly new engine overnight. At present the LEGOL researchers are forced to ignore this problem. Solutions to it may in time suggest themselves. Meanwhile LEGOL must consider a legislative proposal as if it could operate in isolation from everything else in the legal system.

Testing a legislative proposal

R. M. Crooks, a Ministry of Agriculture systems analyst on secondment to the LEGOL team, has just completed a project report for the M.Sc. degree under the title "LEGOL as an aid for the drafting of legislation". It is the first time the team have turned their attention to the creation, as opposed to the operation, of statute law. The Crooks report is therefore of considerable importance (though Mr Crooks is the first to admit that it is only a beginning).

The report is based on an imaginary proposal for the drafting of a Protected Tenancies Bill (which assumes the existing law to give no more protection to tenants than is provided by contract). The 'drafting instructions' are briefly expressed, in simple terms. The Bill is to apply to tenants under contractual tenancies of unfurnished dwellings in England and Wales, where the annual rent does not exceed #500 and the rateable value does not exceed #200. Its operation is to be twofold:-

- (1) If the tenant is married and living with his or her spouse, then on the tenant's death the tenancy is to pass to the spouse (unless by written notice to the landlord the spouse disclaims within seven days).
- (2) The same is to apply if the tenant deserts the spouse (except that the deserted spouse only becomes bound on paying rent).

The report shows how the LEGOL technique (as so far developed) can reduce this proposal into a form which can be tested and refined by a computer program. If real legislation on a topic like this could be produced in a similar way, the means would exist by which a citizen with the equipment described above could obtain immediate answers to his or her enquiries. (For example a woman recently widowed might want to find out whether the landlord could evict her.)

At this point it becomes necessary to explain what the LEGOL technique is. It involves the use of a

specially-invented language. A British Act of Parliament is expressed in legal English (ordinary English interspersed with technical terms having a special meaning in law). The LEGOL technique begins by expressing the subject matter of the legislative proposal in a precisely-structured form. This aims to test the legislative proposal for logical consistency, for ambiguity and imprecision, and for likely effects in operation. It seeks to expose the uncertainty that arises from the informality of ordinary language. All this is done by translating the proposal into the LEGOL language, correcting the deficiencies thereby exposed, and then translating it back again. The LEGOL language is continually being developed by the team, and still has a long way to go before it is sophisticated enough to provide an equivalent for every element in a legislative proposal. Postulating that the real world (upon which legislation must operate) consists of 'entities', the LEGOL language embodies corresponding 'entities'. Its contribution is to define them and their interrelationships with greater logical rigour than natural language achieves.

As ultimately developed, LEGOL should equip the legislative draftsman with a tool with which to test and refine his drafting instructions. This will enable him to seek amplification of the instructions where it is shown to be needed. At a later stage he can use the tool to carry out similar tests on his draft. The tool will supplement the expertise, the common sense and the imagination the draftsman already brings to his task. This is how it works.

LEGOL as a tool for the draftsman

LEGOL tells the draftsman to begin by identifying the relevant entities. The easiest to deal with are those with a physical existence in the real world. In the case of the Protected Tenancies Bill they are *persons* (when not bodies corporate) and *buildings*. Other entities are abstract, whether legal ('tenancy', 'spouse') or other ('tenant's death', 'living with'). The criteria for identifying them must be established in accordance with the LEGOL technique.

Next come detailed instructions for defining the factors which are to be used for dividing entities of a certain kind (e.g. 'buildings') between those that are significant for the purposes of the Bill ('dwellings') and those that are not. Many factors are specified - place, time and number having a particular importance. All the factors are designed to ensure that there will be no doubt about whether at a particular time a particular entity is or is not within the Bill. This process throws up many doubts which the draftsman will need to resolve by consulting those instructing him. (For example is 'spouse' to include a polygamous wife, or a divorced husband whose decree absolute has not yet come through?) The Crooks report identifies no less than 23 entities concealed in the exiguous 'instructions' for the Protected Tenancies Bill.

The LEGOL technique next turns the draftsman's attention to the relationships between the entities. For this purpose the entities are divided into *things*, *conditions* and *states*. The technique aims to secure precision in the way these interact, so far as the interaction is operative within the meaning of the Bill. For this purpose it provides a checklist of necessary attributes for each thing, condition or state. If any attribute is missing or defective, then doubt as to the meaning of the Bill will result. Finally, by use of a LEGOL interpreter converting the now refined concept into computer language, checks can be made and examples worked out. These will confirm the thoroughness and accuracy with which the LEGOL technique has been applied, and also illustrate the working of the legislative scheme in hypothetical real-life situations.

It will be seen that if the wording of a Bill is such that it can be computer-tested in this way, it necessarily follows that the resulting Act will also be in a form suitable for interactive treatment. Instead of trying out dummy situations in order to test and display how the proposed legislation would work in practice, this time the actual real-life situations can be fed into the computer. The widow faced with eviction, and possessing the household equipment referred to at the beginning of this article, will be able to feed in her own problem without expert help. Simply by answering the successive questions appearing on the screen of her video terminal (thus giving the computer the facts of her own case) she will be provided with her answer.

An electronic counsellor?

From the point of view of the citizen, if not perhaps of the legal profession, the prospect opened up by LEGOL is exciting. The citizen is required to obey the law. Ignorance of it, however excusable, is not excused. Moreover ignorance of what has become all-pervasive statute law can be a considerable handicap in a person's business and private activities. To be able to interrogate a desk-top electronic counsellor about one's income tax, or one's duty in respect of a traffic accident, or one's right of recourse against a recalcitrant travel agency, will be of distinct advantage. There is a long way to go before the entire body of law can be made available in this way, but a start has been made.

No doubt there will always be areas where a judicial or administrative discretion must be exercised before the definitive answer can be known. Here all the computer can do is provide the householder with information on how, in the light of relevant factors, the functionary entrusted with the discretion is likely to decide. Information so made available might indeed influence the decision itself. After all the functionary will have a desk- top terminal too!

As well as assisting the individual citizen in this way, linguistic techniques like LEGOL may be expected to enhance the general quality of law. Logical consistency and certainty of operation are not conspicuous features of our present legal system, yet they are highly desirable. Use, for example, of 'entities' tested and refined in expression by the LEGOL technique need not be confined to the Act for which they were devised. An entity of general application (as many are) becomes available to be used over and over again as required in subsequent legislation. In time the availability of what might be called prefabricated legislative units will shorten and simplify the drafting process, as well as furthering consistency of treatment in the law generally.

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