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Ämne: LISA: The Queen Bee metaphor - the existence of a law as a unique instance

For those who attended the LISA meeting yesterday here is an article on one of the major aspects of e-Law versus p-Law – . I sent this to my Master students and thought I would share it with you as well.

I am going to relate here one aspect of this problem, using the “Queen Bee” metaphor. The Queen Bee has a unique status in the hive despite sharing exactly the same genome as the worker bee.

The following text-frame has nothing to do with law of course – it merely presents the Queen Bee :-)

Honeybees are social insects with a marked division of labour among the various bees in the hive. A colony contains one queen, 500 to 1,000 drones and about 30,000 to 60,000 workers.



The largest bee and matriarch of the colony is the queen. She has a large abdomen that extends past her wing tips. She controls the hive by secreting queen substance, a pheromone that works to stimulate behaviours in the hive. Nurtured on a special diet of royal jelly, the queen is the only sexually developed female in the hive. Her major task is laying eggs to produce bees and keep the hive vital. A few weeks after hatching, the queen mates with drones in flight. During this 'mating flight,' the queen receives millions of sperm cells that last her entire life span. A productive queen will lay up to 2,000 eggs in a single day.

So - no more Social-Biology will be found in this addendum, but rather a few reflections upon uniqueness.

Two aspects of uniqueness are of interest in law. First, there is the existence of unique physical objects: things we can identify as unique because they have a combination of distinct physical properties. And secondly there are things that we make unique by virtue of social facts.

The Earth's moon is unique. There is only one. Of course there are many objects that orbit around the earth and if “*an object that orbits around the earth*” was our only definition of *the* moon, we would have to call all sorts of junk we have shot up into our atmosphere in the last 40 years for *the* moon as well.

By adding one or more attributes to our definition of *the* moon we can establish a discerning pinpoint. For example:

An object

that that orbits around the earth

AND

to the naked human eye, looks like blue cheese

Of course the name: “*the moon*”, as well as the defining attributes we pin it down with, are all products of the human mind stated in natural language – the moon itself could care less about what we call it. But if two or more countries (or firms) were vying for ownership of *the moon*, or perhaps some sort of mineral mining rights on *the moon*, then these attributes (or other more serious, crispier variations of them) would have to serve as the discerning definition of what the litigants were actually fighting over.

The moon, with its facility for being distinctly pointed out, is not something I would call the Queen Bee. The moon is rather a *uniquely identifiable physical object*. I would reserve the Queen Bee term to describe **one distinguishable entity amongst a collection of seemingly fungible entities**.

The moon is not fungible. *Fungible* is an important word to understand in this context.

Money is fungible. If you loan me 100 crowns in coins you don't expect me to return exactly the coins you lent me – any 100 crowns will do, or even perhaps the equivalent of 100 crowns in Euros. Money is fungible.

There is an anecdote about a wealthy prince who went to his bank everyday to see his money. He kept track of the serial numbers on all the treasury bills he had deposited and checked that it was exactly those bills and no others that were in the vault. For this prince, money was not fungible: He had unfortunately missed the point of fungibility.

Creating uniqueness through social fact

Before a big league soccer game, a dozen or so balls are inspected by the referee for use in the match. After inspection, the soccer balls are fungible – any one of the balls will do for use in the ensuing game.

Of course, only one ball is to be in play at any particular moment and that ball temporarily takes on a very special status. Almost everything that happens on the field, happens with this ball as a centrepiece and determining factor – this ball is the Queen Bee. The balls on the sideline have no such status.

The status of a ball in play is the results of a “social fact” - in this case the rules of the game. A ball is the Queen Bee only as long as it is on the field and the game is in progress. But any of the other balls can be the Queen Bee when it is their turn to be thrown on the field. Of course there can only be one Queen Bee and if two balls happen to be on the field at the same time the game must be stopped until one is removed.

But are laws physical objects?

You don't need to be a Student of jurisprudence to be aware that there are competing definitions for just what law (or a law) is. Here is a classic of the common-law world;

"A law, in the most general and comprehensive acceptance in which the term, in its literal meaning, is employed, may be said to be a rule laid down for the guidance of an intelligent being by an intelligent being have power over him". (John Austin)

Law is not necessarily a list of commandments chiselled in stone, and *a* law is not necessarily a statute written on a parchment in the vault of some parliament. But nevertheless, in order to avoid arbitrary (and conflicting) references to arbitrary (and conflicting) sources, it helps to have a definite, non-arbitrary, unambiguous, non-malleable point-of-departure.

It helps to have only one Queen

It helps to have only one constitution

It helps to have only one legislative procedure

It helps to have only one hierarchical ordering of adjudicational due process.

It helps to have one Queen Bee.

...even if we hold that laws/rules are not necessarily ascertainable only in legally sanctioned artefacts

...even if we hold with Hart that there are tacit social rules of recognition or obligations of conformity,

... even if we hold with Dworkin that lawyers make use of standards that do not function as rules,

... even if we hold that the law is not in the *letter*.

It helps to have Queen Bees when ever possible.

It helps to have one and only one instance of a definite, non-arbitrary, unambiguous, non-malleable rule – if this rule is available for public inspection, publication and duplication (and alteration when carried out in accordance with formal principles).

Just to be sure we are on the same wavelength here, I am not speaking of the existence of incongruous laws. We all realize that a Parliament might inadvertently enact two *versions* of the same law, or two or more laws that incongruously overlap each other, as for example:

*Freedonia law nr 183950.2) people who drive 10 kilometres over the speed limit **will be whipped**.*

*Freedonia law nr. 74439.5) people who drive 10 kilometres over the speed limit **will be hanged**.*

Unfortunately this sort of thing happens all the time – if less drastically than in my example. But it is not what this monograph is about, as a matter of fact one might hope to address the problem of incongruously overlapping laws by seeing that all laws are decreed electronically – **because it would be easier to discover incongruities with the help of IT.**

No, what we are referring to here is a law that is uniquely identifiable by some naming or numbering schema, such as “The Freedonian Law of Speeding Violations, of Dec 3, 1967, Section 3: Paragraph 23”.

If an Identifier points to and inclusively binds a text such as...

Freedonia Law nr 183950.2 --- begin>

People who drive 10 kilometres over the speed limit will be whipped

Freedonia Law nr 183950.3----end>

...then any instance, any publication, any copy of law nr 183950.2 should be identical with every other instance, publication or copy.

If we were to find in concurrent existence two conflicting versions of .Freedonia Law nr 183950.2; the one proscribing corporal - the other capital, punishment, then we would say that the problem was not **inconsistency between two overlapping laws**, but rather an inconsistency **in the instancing of one law**.

Such an inconsistency could come about if, lets say, a copyist spilt coffee on a law he was copying, causing him to misread it and carry over that misreading to his new copy. Historically that sort of thing has happened all the time, even if we today expect our modern document systems to be capable of preventing such unfortunate occurrences. Today we expect the text of our laws to remain consistent.

But that doesn't mean we give consistent copies equal value as clones!

That just wouldn't do. Because anyone of those copies could be corrupted – either accidentally or maliciously. And in such a case – how would we know which law was correct? How would we know which contract was valid? Which deed in force?

We would determine the original – yes? Yes, but no, because *the* original is not always *the* valid instance.

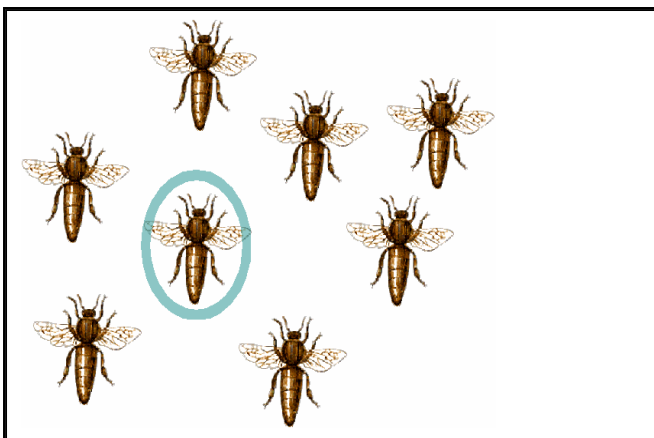
Bees are fungible (to the hive) - The queen Bee is not fungible .

But is not one instance, one sole artefact, a precarious thing to have? If there is only one of something, like the moon, then it is a very rare thing indeed, and if it gets lost or corrupted, we would have nothing in its place? Is it not better to make copies, back-up, clones, reserves? Like the 12 balls in the soccer game that can be called into use when needed? After all they are identical.

Yes, we must be very careful about back-up and reserves – but their reserve-backup status must be clear. The Queen Bee hierarchy must be preserved.

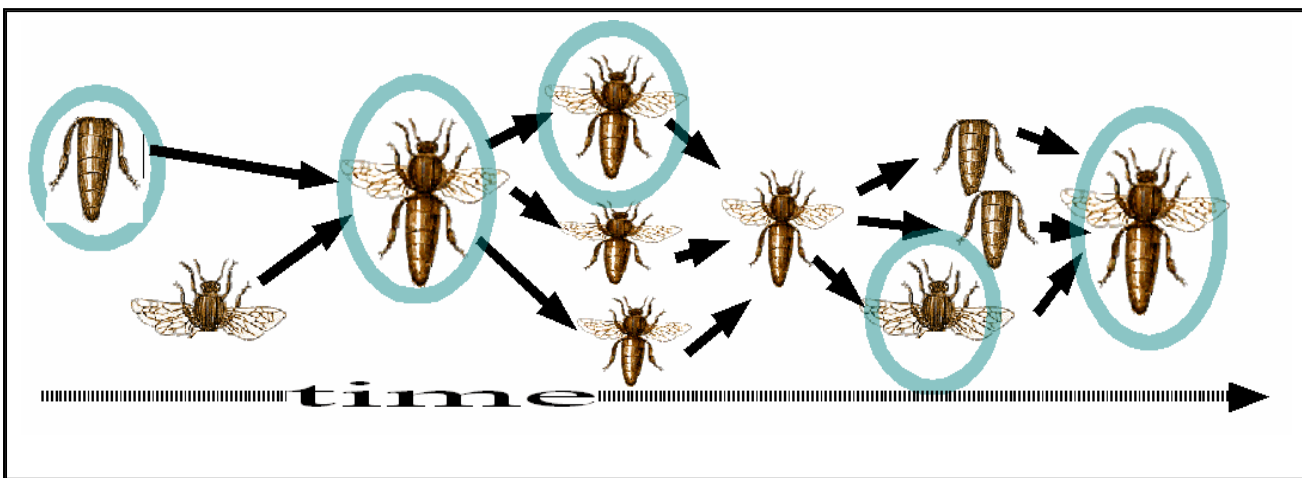
Note: one might say that rules of ascendancy for Queen Beeship are just as much a part of the Queen Bee concept as the uniqueness of the Queen Bee.

We need **one** version of this identifiable law that is supreme amongst all others, one that all others must defer to. the Queen Bee is marked with a blue circle in the drawing below. The other bees might seem to be identical – they might be identical, but we do not grant them queen bee status.



Now there are all sorts of ontological problems in defining a Queen Bee instance of the law. The graphic below illustrates some of the problems involved in the due process of enacting a law over a period of time.

In the development of laws over time, Queen Bee status can be unclear to an observer (or for that matter a participant). Laws can be broken up into segments and rejoined again, sent to various committees with varying juridical status. There can be times when Queen Bee status is suspended altogether and there can be references and links to external facts and evidence, as well as other laws that stretch out over time and space.



But since government does work (albeit erratically at times) we will assume that in the pre-electronic world, Queen Bee status is a manageable problem and that Queen Bees do exist in the world of paper-based laws and rules.

To go further, we will assume the existence and the utility of a uniquely identifiable Queen Bee instance of a rule/law.

Implicit and Explicit meaning in written laws

Now what does this Queen consist of? The intention of a lawmaker as expressed in natural language? Yes, that for sure, but probably something more – most likely pointers to other documents – both Queens and not Queens. Further, the expression of a lawmaker's intentions as expressed in natural language will no doubt be further articulated by the layout and formatting of the text.

In the examples below the columns and rows of a table and the use of italics express meaning not apparent in the text alone. The italics *do something* to the word “whipped” – they change its literal status. And the left and right columns denote a new law replacing an old – typically the old version is to the left and the new to the right.

The offender will be whipped	The offender will be <i>whipped</i>
The offender will be whipped. The offender will be hanged.	
The offender will be whipped	The offender will be hanged

It may be that the meaning brought about by layout and formatting can be expressed in natural language alone. If one was obligated to speak these laws rather than write them down, then the speaker would need to make clear what an italicized “whipping” meant (note: they could for example shrug or intonate the word whipped ironically) and a new law replacing an old would be announced as such, but there can - and often will be, incompatibilities. We might just discover that some things “just are as they are” without anyone remembering how or why they became so.

Note: To think of a parallel example: Pictograms in written languages tend to evolve into ideograms. This I understand is roughly what happened with the family of written language westerners call Chinese. As these evolutions came about, they must have been so gradual as to be hardly decipherable – but in time, mapping between ideograms and their original corresponding pictorial representations would become extremely ambiguous. And a user might find it impossible to trace the meaning of an ideogram back to its pictogram origin

Since layout and formatting are expressive tools and quite helpful in the understanding of texts, we will find their use everywhere.

In sum, there are several major bearers of meaning in a written law .

- Words as formulated as sentences and paragraphs
- The ordering and numbering of sentences and paragraphs.
- The application of formatting codes to the text
- The explicit addressing of other external texts and external objects (laws, place names, boundaries, concepts, measurements etc.)
- The layout of the text.

Now the situation as such is that every polity with a system of laws has a convention (more accurately a plurality of conventions) for applying to - and deriving meaning from, paper-based laws.

Since these conventions have evolved over time, it is not always sure that they are explicitly codified in some system of canonical rules. It can well be that those who work with these laws – simple know how to interpret them on paper, because *it has always been done that way*.

Today in government, almost all queen bees are paper-based and though the production and distribution (copying) of these laws is done electronically – queen bee status is reserved for these bits of paper that physically reside in some *safe place*.

And now, a word from our sponsors

Many students are familiar with the work of Larry Lessig and his equation of law and computer code. In the development of computer code, Queen Bee status is a necessity (even if the term we are using here is not all that common). The Queen Bee of a computer program is always an electronic version. It is always publicly available to someone (it might be held secret from others). It is, if correctly implemented, encased in a system of security and backup, with clear concise rules of ascendancy.

During its lifetime, Queen Bee code is often appended, updated, localized, etc. But always, if correctly implemented, with formalized procedures of versioning and status control.

The moral of this story is: The model for Queen Bee electronic laws can be found in the model of Queen Bee electronic code.

Here for an example is a (perhaps too technical for lawyers - sorry) study of versioning in XML

<http://www.xml.com/pub/a/2004/10/27/extend.html>

A comparative study of Queen Bee procedures in law and technology will reveal an amazing set of parallels, which will of no doubt be of benefit to both domains.

Below is a link to product which facilitates content management for computer code. Though, I, by no means, wish to endorse the product, a read through this sales pitch gives a good introduction to the magnitude of parallels in the creation of both code and law.

<http://www.olefa.com/cgi-bin/olefa?com=00000000200000046131324105526273000>

Some esoteric points

A Queen Bee, as we use the metaphor here, is not necessarily a single and solitary indivisible object. Perhaps you have read in some story how two accomplices might tear a 100 dollar bill into two halves, each keeps one half as a guarantee of some obligation. The 100 dollar bill is only worth its face value if and when the two halves are reunited. By this the fungibility of the divided bill has been negated; a Queen Bee has been created, yet separated.

A Queen Bee instantiation of code or law may also exist in a *distributed* form. Perhaps a code is only valid if separate instances perfectly match each other.