Ideas in Progress

Paper Number 59

Inventors, Inventions and Innovation: chaos or clarity?

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The series constitute ‘ideas in progress,’ after the notion described by I.J. Good in ‘The Scientist Speculates.’ Good also describes ideas about ideas as ‘partly baked ideas’ believing that “... it is often better to be stimulating and wrong than boring and right.” While the papers do not take this tenet as an excuse for licence at the expense of rigour, they are exploratory and the ideas may change as a theme is developed Over time.

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The difference between invention and innovation is often not recognized: the purpose of this short note is to clarify that difference. In all investment discussions investors ask whether a key invention, which is seen to be a discovery, contrivance or the production of a new and previously unknown artefact vital to the business, has been patented: this is correct. Only inventions can be patented. Innovations, which are the introduction of novelties or the alteration of what is established, cannot be patented though they may influence the creation and conduct of a successful business. The nature of a patent and its distinctions are clear in patent law where the following criteria are applied by patent examiners:

A patent protects new inventions and covers how things work, what they do, how they do it, what they are made of and how they are made. It gives the owner the right to prevent others from making, using, importing or selling the invention without permission. The invention must:

- be new
- have an inventive step that is not obvious to someone with knowledge and experience in the subject
- be capable of being made or used in some kind of industry
- not be:
  - a scientific or mathematical discovery, theory or method
  - a literary, dramatic, musical or artistic work
  - a way of performing a mental act, playing a game or doing business
  - the presentation of information, or some computer programs
  - an animal or plant variety
  - a method of medical treatment or diagnosis
  - against public policy or morality.

If an invention meets these requirements, it may be considered for a patent. If granted a patent, must be renewed every year after the 5th year for up to 20 years protection.

Whilst patents are strategic and tactical tools in business, they only remain so for (a) a limited time and (b) as long as the patent holder is willing and able to defend them successfully against attack within the time defined by (a) and within the geography where the patent is effective. To refer to patent counts as a measure of innovating or innovative capability is simply wrong and thoroughly misleading. Invention and innovation are different in nature (see the diagram overleaf). Innovation only applies in formal existing business and all that implies, and will be of infinite variety. By contrast invention may occur either within or outside an existing formal business but wherever it occurs it will always require a new process for conversion into a 'business' with successful continuity. An improvement to the underlying idea in a granted patent may be granted a patent effectively extending the lifetime of the original patented idea.

Not all inventions are patentable and many are not submitted as patent applications. Consequently, the number of inventions are unknown and are >> than the number of patents granted. Many inventions remain either unused or shielded as 'commercial secrets' while others are incorporated into products and processes in such a way as to remain hidden to all but the most exhaustive reverse engineering. Use of a patent count ‘measures’ inventive with a low level of precision for reasons given above. Unless the way an individual patent is used is followed through its life in industrial applications patent counting is a bit like using a water meter to measure electricity consumption!

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