Leapfrog v. Fisher-Price that a person of ordinary skill in the art would have found it "obvious to combine the adaptation of an old idea with newer technology."[164]

In terms of the implications of *KSR*, since clean technologies often involve a "mosaicing of pre-existing technologies" (*i.e.*, combining more than one piece of prior art), it is important to draft patent claims so as to capture the integration of the several technologies in order to avoid an obviousness rejection under Section 103 of the U.S. Patent Act.[165]

5. 'Greenness' and Utility Requirements

The discussions so far do not suggest a special rule for green technology under patent law. If an invention has ecologically sound effects, what should be considered for patenting is simply whether or not such invention is novel, non-obvious and useful, rather than its green effects. Especially in relation to utility, one may wonder if perhaps environmental soundness is 'useful' in terms of patent law and therefore must be considered as part of patentability requirements. A clue to the answer might be found in the development of the utility requirement under U.S. patent law.[166]

Back in 1966, the Supreme Court in *Brenner v. Manson* held that usefulness is satisfied when "specific benefits exist in currently available form."[167] Meanwhile, the *Application of Anthony* decision held that safety in treating humans is not a question of patent validity within Section 101 of the U.S. Patent Act, but that it is for the U.S. Food and Drug Administration (FDA) to test the safety or efficacy of pharmaceutical products.[168] Rejecting a special rule for the utility of pharmaceutical inventions, *Application of Antony* represented a lower threshold for the utility requirement. *In re Fisher* found that there was no substantial utility in an invention unless and until a process is refined and developed to the point where specific benefit exists in currently available form and that utility must be such that a person

164 Leapfrog Enterprises, Inc. v. Fisher-Price, Inc., 485 F.3d 1157 (Fed. Cir. 2007). *See also* Rader, *supra* note 160.

165 Mark Sajewycz, Ogilvy Renault, *Patenting Clean Technologies: Trends, Issues and Strategies* (Jan. 21, 2010), *at* http://www.ogilvyrenault.com/en/resourceCentre_10025.htm.

166 *See generally* F. Scott Kieff, Lecture at the Munich Intellectual Property Law Center: Pharmaceuticals and IP (Summer 2010) (on file with author).

167 Brenner, Commissioner of Patents v. Manson, 383 U.S. 519 (1966).

168 *In re* Application of Anthony, 414 F.2d 1383 (C.C.P.A. 1969) (noting that the safety question may be an issue under the enablement requirement in Section 112 of the U.S. Patent Act. Enablement matters if the disclosure includes an element on safety or effectiveness for treating humans, but it is the FDA that has to verify such safety or effectiveness.).

skilled in the art can use a claimed invention to provide some immediate benefit to the public.[169]

In short, the issue of safety or efficacy of drugs is beyond the scope of patent law and a matter for the FDA to verify. Likewise, it may be argued that 'greenness', such as the extent of reduction of greenhouse gas emissions or energy efficiency, rather than being mixed into legal patenting criteria should as a matter of policy be reviewed by specialized environmental agencies. Here, it may be noted that for example, Canada, the EU, Japan, Korea, the Philippines and the US run environmental technology verification programs to provide data for commercially viable environmental technologies for the benefit of related parties and the public.[170]

B. Role of Patent Policy

What is and should be the role of patent policy for stimulating green innovation and technology transfer? One discernible principle of the patent system is "transparency,"[171] resulting from disclosure as the *quid pro quo* of patent exclusivity. Patent information enables policymakers to track developments in important areas of technology and to use such data as an information base for stimulating innovation and diffusion of technology.[172] Another important component of patent policy is the active provision of procedures within the granting system tailored to certain perceived public goals. National offices increasingly provide supplementary services or preferential treatment accommodating green technology. Patent offices including those of Japan, Korea, the UK, the US and others have adopted so-called 'fast-tracking' of green technology, in which green inventions can be processed with priority in patent examination, so as to stimulate innovators' interest. As another source of stimulus, it has been suggested that "patenting behaviour is responsive to fee variations."[173]

To help explore the scope for patent policy, this part outlines and examines related activities by WIPO and selected national IP offices, in particular forms of preferential treatment for green technology. This part furthermore explores, in a green context, opportunities offered by the information function of patents.

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169 *In re* Fisher, 421 F.3d 1365 (Fed. Cir. 2005) (*cf.* Judge Rader's dissenting opinion argues that research tools such as expressed sequence tags are 'useful' because they help researchers identify and understand a previously unknown and invisible structure and advance science).

170 EPA, Fact Sheet: EPA's Environmental Technology Verification Program (Oct. 2008), *at* http://www.epa.gov/nrmrl/std/etv/pubs/600f08012.pdf.

171 *Supra* note 5 at 5.

172 *Id.*

173 *Supra* note 4. *See also generally* WIPO Standing Committee on the Law of Patents 2nd Session, Information Concerning Fee Reductions by the Offices, Apr. 12-23, 1999, WIPO Doc. SCP/2/6 (Mar. 17, 1999).