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Summary:

Humanity didn't climb to the top of the food chain with razor-sharp claws or lightning-fast legs, it climbed up with its opposable thumbs. Using those thumbs we created things to make our lives easier, improved our well-being. The one thing that never changed throughout the millennia is that there is only one way to solve our problems and it is through innovation. Knowing this, society should focus on providing stimulus and an optimal environment to technological progress.

Essay

Humanity didn't climb to the top of the food chain with razor-sharp claws or lightning-fast legs, it climbed up with its opposable thumbs. Using those thumbs we created things to make our lives easier, improved our well-being. The one thing that never changed throughout the millennia is that there is only one way to solve our problems and it is through innovation. Knowing this, society should focus on providing stimulus and an optimal environment to technological progress.

The patent system was established to be such a stimulus to research and development. While it accomplishes its goal to some degree, its negative effects are far too great to be neglected. A patent is a temporary (for 20 years according to Agreement on Trade-Related Aspects of Intellectual Property Rights, the most prominent international agreement on IP rights today) *monopoly* over an invention granted by a state or organization in exchange for the invention's disclosure. Many problems stem from the fact that it is a monopoly, and markets where monopolies are present usually aren't efficient.

Contemporary research is built on tremendous amounts of previous research, scientists and engineers need to use the processes and technics already developed to make progress, otherwise technology would stay at a standstill. When something is patented it is considered as a taboo, researchers have to avoid and design around them, otherwise they are bound to pay often enormous licencing fees. These design arounds sometimes can be costly and overcomplicated and in some cases impossible to do. There are even some companies called patent trolls that specialize in acquiring patents and composing thickets (groups of overlapping patents that make design arounds unachievable) without actually commercializing the inventions, just collecting the highest licencing fee possible. The practice of creating patent thickets, affects R&D greatly. This practice foreshadows the predictions of Michael Heller and Rebecca Sue Eisenberg, who have claimed that intellectual property rights might become so fragmented, that no one will be able to use them and gain from them.

In addition, it is a capitalistic system, and that is another source of problems. Corporates are only interested in projects with the highest profits and short-term returns. A number of promising research initiatives aren't funded to a satisfactory degree, because they are considered too far-fetched, or they don't bring immediate profit. Let's take for example cold fusion. It could satisfy all our energy needs, without much pollution, and with an appropriate budget it could be realized in the next 10-20 years, but for some reason it doesn't get the support it deserves.

But all these aspects are insignificant compared to the patent system's effect on developing countries. The licensing fees put an exorbitant burden on the industries of Third World countries, where intellectual capital is not so prominent. To make things worse, corporates don't spend their research budgets on projects crucial for developing countries because it would yield smaller profit margins, than the same amount of money allocated to projects related to countries with greater spending power. Sadly, they fail to see the investment opportunities in those underdeveloped places, The positive side to the lacking infrastructure of the Third World – it has a clean slate. In developed countries infrastructure is quite old, and even when there is a more up-to-

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date alternative, destroying the old and building new from scratch wouldn't be economical, so they fix and upgrade the already established systems. But that is not the case with developing countries, in those places it would be economical to build the cutting edge and thus more efficient systems.

The patent system should be revised in a manner that keeps in touch with the interests of developing countries. The 20-year period during the patentee owns the exclusive rights to the invention definitely should be reduced. In 20 years technology changed too much. The processing capabilities of a 20 year old supercomputer are fitted into cellphones today! In addition public research spending should be increased to support the crucial projects that have been overlooked by the corporate world. Creativity is something every human being possesses, it shouldn't be tied down by corporate policies and predicted profit diagrams, it should be allowed to do its best to help society progress.