The Inverse Commons - A Discontinuity in Business Models.

One in a continuing series of "thought-pieces" around corporate innovation.

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Introduction: This note is an attempt to stimulate discussion about what we see as some seismic shifts occurring as a result of "technology ubiquity". Several streams of academic research have been looking at specific and possibly related topics such as "open innovation", social networks, bricolage, the inverse commons, etc. In this paper, we first describe some of these terms and then attempt to stand back and look holistically at what these trends may portend for new business models and growth opportunities and/or threats. There are now enough examples of businesses that have grown rapidly in value from relatively small investments by triggering the power of "free" social networks. We should therefore try to analyze the reasons for their success and why others failed.

The inverse commons is a term first introduced by Eric Raymond that is used to describe the result of sharing in which users of a "good" actually contribute to the overall value rather than detracting from it. The well understood "law of the commons" actually dates back to medieval England, where a "common" piece of land was set aside for the village to share, each family, say, being allowed to graze one cow on the "commons". Many of these pastures still exist, even in London where Clapham, Barnes, Mitcham Commons etc. existed in separate villages before London became a metropolis. If the land can support 100 grazing animals, then one villager can readily double their output by sneaking on one more cow, arguing that "just one in a hundred makes little difference" overall. This is clearly an unstable situation. Personal greed can destroy the common wealth. In contrast, the inverse commons describes a situation in which an individual adds to the total wealth every time they take something from the commons. This is a powerful concept, as it is more than self-sustaining – if conditions are right the value created can grow exponentially.

The term is particular relevant to digital information, both content and software. This is a different sort of good from material "grass". Its consumption does not remove the value to another consumer. Further, if the act of using information also *adds* to the value of the information, we have a powerful and generative form of inverse commons. As an example, voluntary review writing of book or music reviews on Amazon both provides value to the reviewer if reviews already exist, while, at the same time, contributing to the overall value presented on the Amazon web-site. Clearly if nobody writes reviews, but merely reads them, then we do not have a growth in the commons. If the reviews age, then the situation reverts to being more like the "grass" example with value declining over time.

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[1] Thanks are due to Dr. Raghu Garud and Philipp Tuertscher for thoughtful discussion on these topics.

Technology Ubiquity and Unknowing Contribution to the Commons. In this context technology means more than the growth of the internet. It refers to the fact that often unknowingly nearly everything we do is increasingly enabled by technology *and by interacting with a digital network, public or private, we contribute to the commons.* For example, when we make a mobile phone call the data concerning this call is agglomerated by the network provider in order to optimize network and capital deployment. Or, when we rent a movie from Netflix, our feedback improves the service for all subscribers while feeding into the inventory management system of the company. Or again, we make purchases at a food store, which enables both the store and their suppliers to provide not only better service to me but all other consumers. This technology ubiquity subtly creates a pervasive and powerful set of inverse commons.

Willing Contributions to the Commons. In the previous paragraph, we focused mostly on unwitting contributions to the commons. However, there are many instances where experts contribute to the commons for free. For example:

- The development of the Linux operating system is the most studied and successful example.
- Wiki software, which can be downloaded for free, encourages collaboration in authorship. The most well-known example is the application wikipedia which far exceeds any of the hard published encyclopedias in content and languages. More recently the Wiki concept has been extended to such products as Wiki-calc and co-word for collaborative office work.
- Pearson and other publishers are experimenting with freely contributed authorship and editing, whereby experts create content as well as peer edit books. The publisher then sells the resulting hard copy versions through their existing distribution channels. No royalties, limited costs of editing, lower risk in going to print, and potentially higher margins make this an attractive business concept. This model is already used in the education book sector and is migrating to the trade sector.
- Zimbra, a VC funded company, developed new e-mail and collaboration software in record time using free “open-source” downloads for key modules and just writing code to join them together.
- The value created by YouTubes was largely derived through free content uploaded by social networkers which in turn created definable traffic of great value to advertisers.

There are many other examples which I am sure you have read about. The interest here does not lie in any particular case, but in the underlying issues which the free contribution to the commons raises.

Motivations for contributing to the commons. The results of research in this area are ambiguous. Currently we can say that the motivations can range from altruism through to revenge. In any particular case, the variables are too complex for us to predict which social group or sub-group will respond to any particular stimulus, and whether the reaction will remain small or create a self-sustaining ground swell. To illustrate this

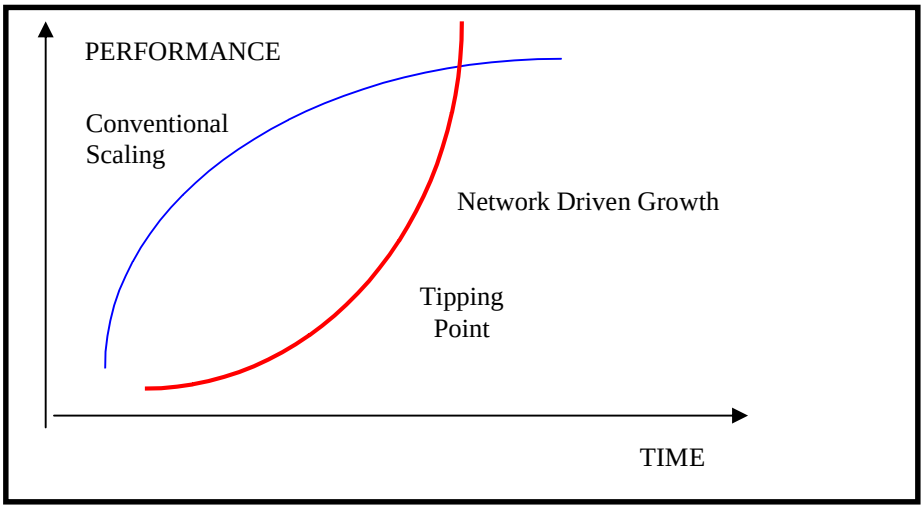
problem here is a partial list of the motivations that are observed in order ranging from "passive to aggressive":

- *Philosophy of Life.* In this case, individuals are motivated by a spiritual need to "leave the world a better place" for others. They do not seek attribution or any other benefit. Indeed, they may actively shy away from any attachment to their contribution or any recognition of their work.
- *Altruism:* One step up from here is individuals that, mostly for personal reasons, have reached a stage in their lives in which "giving" in of itself is sufficient motivation. Perhaps we all have a philanthropic gene somewhere and the action here is closely related to this.
- *Bricolage:* This term was first coined by a French social sciences researcher, who observed machinists creating complex and personal ornaments that they placed close to their workplace. The motivation here seems to be one whereby the satisfaction arises from just exercising one's skills to their utmost – a kind of "celebration of excellence". Bricoleurs do not seek attribution for their work – the sheer excellence of their output is sufficient. This may be the motivation for many hackers where the elegant solving of a complex problem provides both challenge and satisfaction. We all like to finish a cross-word!
- *Peer recognition:* In this case, the personal satisfaction comes from having your peers witness the excellent work that you have contributed. This motivation is well known and is common, for example, in academic research, where peer review is central to the process.
- *Fame:* One step further and the individual wants to be known for the excellence of his/her contribution. Fame may be sufficient in of itself, or might be a planned step to a coveted and highly remunerated position. In both cases, the contribution to the commons is freely offered. An example here are "serial reviewers" on Amazon. Or again, there is a class of contributors to wikipedia which have contributed hundreds, even thousands of articles. Are they trying to parade their prowess or build their reputation for future leverage?
- *Revenge:* This is supposedly driven by despise of a perceived oligarchy (Microsoft is often mentioned in this regard). The individual contributor believes that, by combining with others, together they can unseat the powerful. There does not seem to be a great deal of evidence for this. More likely, those that freely build products to compete with powerful entrenched competitors are driven by developing something that is truly better, indeed excellent.

Summarizing this section, we see that there are many underlying motivations for experts to contribute freely to the "commons" for the benefit of many. This is a complex social phenomenon, which is really just emerging as a major factor in the business world. It existed in pockets before the growth of the internet of course, but now the infrastructure is in place for these motivations to rapidly develop scale.

When the personal motivations create a "social activity" then the network effects can be extremely powerful. This chart shows this schematically – triggering a social network creates a positive feedback to growth whereas a conventional linear business model may

reach growth barriers due to resource limitations. Often, a "tipping point" is sought – point at which there is sufficient scale and awareness that the growth in the valuable commons grows exponentially without further investment. Defining and getting to this "tipping point" is key in determining how likely a "inverse commons" based business model will succeed.



What does this mean for business executives" There are several implications arising from this discourse.

- Capturing value from "unknowing" contributors to the 'limited commons"[2] can be a powerful way of building barriers to competitors. Business models that incorporate this into their structure are attractive.
- Building new businesses based on the expectation of using "knowing contributors" to the commons is unpredictable. Examples would suggest that there has to be some substantial assets in place before value can be captured – see the Pearson example above. This implies that accessing established corporate assets or building engaged corporate partnerships early in the stage of the initiative can reduce the investment risk by shortening the path to the tipping point and leveraging the power of existing networks, brand, or customer base, etc.
- On the other hand, the unpredictability and potential rapid emergence of powerful groups of "free and motivated" commons contributors may pose a significant threat to companies built along a more conventional and predictable road map. Such potential and emergent competitors cannot be due diligenced. Therefore business plans and their contained models should be explored through such techniques as gaming and scenarios to build in, as much as possible, barriers to new, commons driven, enterprises and even "invisible" networks.
- Business models should be explored whereby commons contributors are encouraged to participate in the product development process. One mechanism for this is to launch incomplete products and have the commons provide feedback

[2] Limited here refers to a commons that can be accessed preferentially by the enterprise – e.g. the Netflix customer preference database.

to the product development process or even build onto the product.[3] This technique of "designing for incompleteness" is being used effectively by Google for example.

Summary: IT networks enable social groups to interact in a "inverse commons" model to create new businesses or challenge existing ones in a rather unpredictable manner. Exploring how to trigger these networks and capture the value they create should be one of the ingredients in new business innovation efforts. Additionally, such social networks can pose a significant threat to more conventional "linear" business development, and therefore should be carefully monitored and examined at the early stages of new business creation where IT plays a central role.

Questions to consider:

1) What different mechanisms can be used to quickly reach the "tipping point" within a social network?

2) Once the exponential growth is triggered, how can you prevent the community fragmenting and losing its value creation ability?

3) What strategies can be explored to migrate an existing company within a traditional resource limited business model (the blue curve), to a self-generative model (the red curve above)?

4) In designing a social networked driven company, how can you test whether the network will self-generate or die?

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[3] As one example of this, Netflix, recognizing the true value of "searching the long-tail" offered a prize to the best algorithm for improving their search software. They expect many hundreds of smart hackers to contribute their solutions which will then be owned and applied by Netflix.