



**E**nhancing the  
Disclosure  
of Faculty Inventions

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December 2013

**Keywords:** University patenting,  
technology licensing, bargaining.

The Association of University Technology Managers (AUTM) has calculated that in fiscal year 2004 alone, the largest 196 research universities in the US earned \$1.474 billion from licensing their inventions. Nonetheless, considering that only the least valuable inventions are disclosed to the universities, the \$1.474 billion capture just a fraction of the revenues lost from technologies that were not disclosed. Universities seem unprepared to tackle this problem, which is further exacerbated by the universities' inability to monitor star scientist and the obvious problems that surrounds the prosecution of non-disclosing academics. This inability is further attested by the *Amnesty days* that some institutions are currently considering for non-disclosing faculty scientist. In what follows I propose a forward looking policy that can incentivize faculty inventors to disclose their inventions to their university.

Consider for the moment a bargaining negotiation between two independent parties on how to split a certain value between them. Experience teaches us that an agent, who is left destitute if the negotiations are not fruitful, is obliged to bargain with her back against the wall, accepting even suboptimal arrangements. By contrast, the same agent should expect a better bargaining outcome when she bargains having something to rely on if bargaining fails; a positive outside option. This simple principle, which is codified in the way cooperative game theory treats Nash-bargaining, is the starting point of our policy proposal as it

effectively suggests that by pumping up an agent's outside option she can expect a better bargaining outcome.

The negotiation we have in mind is the bargaining over licensing fees that takes place when a faculty scientist tries to license her technology (on her own) to a 3<sup>rd</sup> party. It stands to reason that if an outside party, such as the University Technology Transfer Office (TTO), artificially pumped up the faculty scientist's outside option the scientist's bargaining outcome (from self licensing the technology) would be enhanced. Therefore, the following question is in order: *would the faculty scientist, while opting to license her technology on her own, be willing to pay in order to obtain this enhanced bargaining outcome?* To put it differently, would the faculty scientist be willing to disclose her

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technology to the TTO, allowing the TTO to get its share of the licensing deal in exchange for such an outside option? Practical reasoning immediately suggests that disclosure is pertinent on the size of the outside option and on the TTO's share of the proceeds. In fact, for the polar case where the TTO offers such an option for a very small charge we should expect disclosure to be paramount.

As I have recently argued (jointly with Elias Carayannis from George Washington University) in a paper that was published in the *Journal of Technology Transfer*,<sup>1</sup> all that is needed for this policy to work is for the TTO to offer, upon disclosure, an "insurance" that guarantees the faculty scientist some return just in case she fails to license (on her own) her technology. For our purpose, this "insurance" can even be non-pecuniary taking the form, for example, of extra brownie points (or any other form of social currency) in appreciation for the (important

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<sup>1</sup> *A policy for enhancing the disclosure of university faculty invention*, The *Journal of Technology Transfer*, June 2013, Volume 38, Issue 3, pp 341-347.

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yet unlicensed) research of faculty scientists.

By offering some “insurance” the university is providing a supplementary incentive to faculty scientists, allowing them to enjoy an additional option and earn some positive outcome even upon failure to license. This approach adds to the TTO’s armory a forward looking method of disclosure that is not based on monitoring faculty inventions. The latter method is clearly limited on account of the multi-faceted nature of technology transfer, which can be formal or informal, tacit or not etc. Thus, it is not surprising that incentives for disclosure are not easy to establish.

By focusing on failures, this “insurance” mechanism shares some common aspects with the Phoenix Awards, pioneered by the Economic Development Board (EDB) of Singapore. Specifically, since 2000 the Phoenix Award “*seeks to acknowledge technology-related entrepreneurs who have weathered the storm prior to success*”. For this award, which seems to be largely dormant at the moment, nominees are evaluated on the way they managed to overcome past business failures prior to finding success using technology.

In retrospect, I have argued for a policy instrument that can aid universities limit the number of undisclosed faculty inventions. This “insurance” provides an incentive for disclosure, which if calibrated properly, can lead to full disclosure. The role of this instrument though should not be considered as being limited to technology disclosure alone. For example, it is straight forward to envision universities using such policies in pursue of talented academic recruits, who are attracted to the university lab by the promise of this additional payment.