

Graham, a well-known hacker and essayist (and all-around nice guy) gave a thought-provoking and at times hilarious talk about the power of the marginal. He began with an observation by his friend Trevor Blackwell. On a trip to the Apple garage, Blackwell who hails from Saskatchewan, was amazed at how dedicated Jobs and Wozniak must have been to work in a garage. “Those guys must have been freezing!” Graham pointed out that the mild climate of Silicon Valley, which has sprouted quite a few famous startups, encourages work on the margins, where there is more incentive to tinker and much less need to justify the use of well-heated indoor spaces. There is a paradox, however: even though many hackers and founders come from and work best on the margins, many also crave acceptance by the mainstream. This is not a good thing; most great ideas come from the margins. Graham made a witty attempt at explaining why this is so and what can be done to encourage the process.

He touched on many core ideas: the disadvantages of “insider” (mainstream) projects, illustrated via analogy with the government commissioning the writing of the Great American Novel; ways of determining in what fields it’s worth trying to become an insider, including evaluation of the tests that admit you and the quality of existing insiders (from a practitioner’s point of view); why big companies frequently get blind-sided by startups, because the employees continually undergo tests for the wrong qualities; how outsider success hinges on corrupt tests selecting ineffectual insiders with lots of money, followed by fair tests such as the marketplace, where, thanks to the Internet, ideas are increasingly promotable on a level playing field.

Graham provided a veritable guidebook for success as an outsider: In any field, even in those with honest tests for inner-circle admission, outsiders don’t have much to lose; they can take risks again and again, with few people noticing their failures. Tradition should generally be shunned, as the state of the art changes much faster these days and the space of possibilities is ever growing. Nor can outsiders allow their lives to become scheduled; it’s not good for thinking. Long, uninterrupted blocks of time allow broad tinkering. It’s also essential for outsiders to stay in direct contact with the latest platforms, programming languages, and other technologies. Delegation, especially in the starting phases of an “unplanned” project, is a death knell; if you are not doing almost all the work yourself, you stop learning. Outsiders must find problems that can be solved in one person’s head (like the Woz building the hardware and software for the Apple II). One way is to focus on the places where tasks are normally divided: create a programming language and, instead of shotgunning it to other hackers, build something useful with it and hand that off. Since outsiders don’t have the benefit of highly focused training, they can cast a wide net, creating new interdisciplinary projects for themselves, learning enough in each area to hack together something brand new. Finally, working on small things provides quick gratification and the ability to make do with less.

The remainder of Graham’s talk focused on how to make up for what insiders often have—for instance, an audience, money, nonmaterial resources—without becoming like them. His concluding advice was to try just hacking things together; when people complain that you’re

---

## ADDENDUM TO ANNUAL TECH '06

2006 USENIX ANNUAL TECHNICAL  
CONFERENCE INVITED TALK

### *Hackers and Founders*

Paul Graham, *Y Combinator*  
Summarized by Marc Chiarini

*[This summary was inadvertently omitted from the conference summaries published in the October 2006 ;login:. We apologize to the summarizer, the speaker, and our readers.]*

unqualified or that what you've been doing is "inappropriate," you know you're on the right track!

In the Q&A, people asked what it takes to be a good startup founder. You need to be unbelievably determined, you have to have a good sense of design, and you have to be outgoing enough to speak with other people. Q: How does one make something marginal catch on? A: Start with other hackers and early adopters (Google was a great example, no marketing, just word of mouth). Q: What is the path to startup success? A: The most important thing is to make something that other people want or, better yet, need. Q: How do you know when to let something you've created run its course or to intervene in its development? A: You cannot hose yourself by open-sourcing everything and letting people play. Q: How do you know when something has failed and it's time to try your next foolish idea? A: Collect good friends whose opinion you trust, and always be open to suggestions.