

if the value for M is zero for the observed actor and survival is infinitesimal greater than 0, detonation dominates. Likewise, if we build in opponent morality into the probability of opponent detonation, and opponent morality is zero, then the cost of morality becomes too high. Obviously, the game becomes increasingly complicated, as these parameters are made endogenous.

The actors must determine a subjective probability of the game being false (i.e. there may be incomplete or incorrect information given to them by the joker, hence they need to figure out such things by themselves): may be, the probability of punishment is not 1. The probability of punishment could go down from a 100 per cent if the passengers believe that the Joker is lying about the deadline and if they think there is a chance of technological failure such that their detonator may indeed destroy their own ship (adding a hidden cost to detonation), or if they live in a world with Batman. I would venture forth to assume that the probability of punishment is inversely proportional to the probability that Batman exists with some modification based on his likelihood of failing to save people -- but that is just what I think me.

There are a few other circumstances in this movie that can be subject to game theory applications and I have not exhausted the ways in which this game could be modelled. However, I think this calls for a new villain in the third movie of the trilogy, "The Game Theorist", who will be more of riddler, but probably deadlier, and will compel Batman to use mathematics to fight crime.

References:

1. www.quantitativepeace.com/blog/2008/07/the-dark-knight.html

Costs and Benefits of a College Dropout

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III Year

"Whenever you find yourself on the side of the majority,

It is time to pause and reflect." ~ Mark Twain

Larry Ellison of Oracle, Bill Gates and Paul Allen of Microsoft, Mark Zuckerberg and Dustin Moskovitz of Facebook, Michael Dell of Dell Computers, Brian Dunn of Best Buy, Anna Wintour of Vogue, Barry Diller of IAC, John Mackey of Whole Foods, David Geffen, Ralph Lauren and Ted Turner. What is the common thing among these people? They are successful. What else? Yes, they are among those business leaders who got their starts without the benefit of degrees. We all know the story of Steve Jobs, who dropped out of Reed College. Even David Plouffe, senior advisor to President Barack Obama and architect of his innovative and historically unprecedented campaign, dropped out of the University of Delaware to work in politics (returning to complete his degree in 2010). President George W. Bush's top adviser, Karl Rove, and John McCain's 2008 campaign manager, Steve Schmidt, also lacked degrees. Examples are profound that prove that a degree or two from college may not be a necessary condition to achieve monetary success in life. Some would call these cases exceptional. Well, all of them? So, here I attempt to find a pattern in these unconventional realities of success. The article carries the assumption that we are taking into consideration factors other than

inheriting property from parents or using the same as the start-up capital or even as back up. Further, just to avoid any misunderstanding, few 'if' and 'then' cases need to be clarified. One, we don't assume that dropping out of college is a necessary or even a sufficient condition to become successful. Secondly, being a college-dropout-turned-successful-entrepreneur is just a subset of being a successful entrepreneur; that is, leaving college or being thrown out of college aren't the only ways to achieve success. Here we look at the cases say mentioned above. Recognizing this does not negate the importance of a college education -- the intellectual knowledge, access to a wide array of subjects and experience gained on a college campus can be transformative.

As commonly quoted, the causality in the correlation is explained by the conventional nature of a typical college degree saying that it restricts new thoughts, new ideas as one is expected to adhere to the strict norms say, the prescribed text, already-announced-exams based on the texts or attendance in classes. Wondering of what would have led these people to drop out from college made me make a list of all the costs and benefits that would have occurred to them while making the decision (doesn't apply to non-wishful dropouts!).

Costs

For a person to decide whether to leave college or continue with the degree, there are several kinds of costs that play decisive role in the case. Firstly, there are explicit costs of college dropout: one, it is the loss of degree one could have got had the drop out decision wasn't made; unable to acquire the degree results in lower unemployment rates overall and the obvious consequence of neither getting a job in the short run nor getting endowed with some sort of back-up

to rely upon if nothing works right; two, the opportunity cost i.e. the cost of the next best alternative, equals the benefit that would have been implied by a job/work/activity pursued other than dropping out of college, like the benefit of doing a less paying job or just hanging out around with friends for few months. Unbearable effects of an unpaid student loan would make the matters worse! Secondly, besides the monetary costs, there are implicit costs that need to be taken into account: (a) time spent (wasted) in, say, bringing up the idea of a workable start up, (b) cost of uncertainty about future: No backup to rely upon, no inheritance to feed on and of course, no income to survive by!, (c) societal pressure not to drop out- friends, parents, relatives, acquaintances, everyone would come and suggest their ways of achieving success and the 'darkness before dawn' dialogues.

Benefits

Business is nothing but the execution of a brilliant idea. The idea need not sprout within the binding walls of classrooms or laboratories. It finds its birth in the creativity and the ardent desire to innovate. Dropping out of college gives the time and energy to think big and implement bigger. The inner being is happier while, the outer being is still coping with the long list of costs. With no compliance with the scheduled tests or strict deadlines, there is scope for trial and error. May be, the world would witness the birth of another Edison! When predictable curriculum gets boring, exploring divergent worlds might be a dream come true and natural curiosity takes form.

Which way to go? : The spillover effect

The decision so crucial might even be laughed upon by many because the discussion is just considered to be futile by

them as what other than a degree fetch you a decent job? Well, world would have simpler if that was the end of the story. Interestingly, it is not! Because the world is dynamic and so is the human mind, bubbling with curiosity. For the person who is to make the decision, costs might be very high at times. But like a lottery, say, if it works, will do wonders: not only to the entrepreneur but to the world as well. Do we sense a spillover effect here (?) Lottery for the individual and spillover for the rest of the world! Jobs faced the costs and we use iPhones years after! Not so sure what was the common idea that occurred to all these successful personalities at different times, what is certain that the idea emerged from the freedom of thought and constant inspiration without getting bogged down by the costs.

For the world to prosper, we probably need many more budding entrepreneurs who have the courage to think the different way. Maybe, among the list of the college dropouts every year in every college, there's a Jobs or a Gates who leads us to yet better lives!