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Steve Jobs and Philosophy

For Those Who Think Different

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How Can We Make Entrepreneurs?

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As a kid, Steve Jobs hated school. Many of us can relate, even if we're not brilliant business innovators. School bored the young Jobs painfully, and he reacted by engaging in acts of disobedience and defiance. "I was pretty bored in school," he remembers, "and I turned into a little terror." As a result, he was expelled from the third grade. Later, he loathed his junior high school, and one day he simply refused to go back. So adamant was the adolescent Jobs that his parents moved to another California town in hopes of finding a better fit.

The adult Jobs became one of the outstanding entrepreneurs of his generation. But his school experiences raise a question: Did Steve Jobs fail to adapt himself to the system, or did the school system fail to fit Steve Jobs?

A Japanese team of investigators recently came to the United States to study its school system. Japan is a successful nation—prosperous and dynamic in many areas. But the team had a question: *Why does our country have so few innovators?*

They looked to the United States with its many centers of innovation: Silicon Valley technology, Hollywood movies, New York finance, Broadway theater, and others. In the business world, they noted the many entrepreneurs such as Bill Gates, Martha Stewart, Oprah Winfrey, and Mark Zuckerberg.

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So the Japanese investigators asked the question: *What are American schools doing so well to generate so many creative, innovative, entrepreneurs?* What's their "secret ingredient"? The question's important, because we live in an era that, for the first time in history, is taking entrepreneurship seriously.

Our business-employment environment is different than it used to be. Steven Rogers has pointed out:

In the 1960s, 1 out of every 4 persons in the United States worked for a Fortune 500 company. Today, only 1 out of every 14 people works for these companies. Employment at Fortune 500 companies peaked at 16.5 million people in 1979 and has steadily declined every year to approximately 10.5 million people today. (*The Entrepreneur's Guide to Finance and Business*, p. 42)

That's a major shift in the employment market.

Economics has been transforming itself into what economists Arnold Kling and Nick Schulz call "Economics 2.0." For generations, most economists ignored or downplayed the unpredictable and idiosyncratic entrepreneur and focused on abstracted, impersonal models. Contrarians such as Joseph Schumpeter and Israel Kirzner argued for the central importance of entrepreneurship, but they were lonely voices in economics. Only recently has mainstream economics begun recasting itself on the basis of entrepreneurship.

In the Psychology and Ethics literature, we see a movement toward understanding entrepreneurship as key to a flourishing life. Not only in our work but in our overall lives, psychologists like Martin Seligman are stressing autonomy, self-directedness, and creative exploration as foundational ingredients in a healthy life. And moral philosophers are now making connections between entrepreneurial traits and moral virtues in the context of making our careers an integral part of our overall flourishing lives.

So in this new, entrepreneurial century, how do we parents and educators help our children and students prepare for an entrepreneurial economy and an entrepreneurial life?

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Asking the Right Question

The Japanese investigators' question is important but mis-focused. The American "secret ingredient" is *not* in the schools. Most US formal schooling is government schooling, and most schools are not good at teaching entrepreneurship. Some schools in prosperous neighborhoods are solid, but most are weak and many are terrible.

Consider the many kids who start school full of energy and curiosity and excitement—but after a few years they come to dislike or even hate school. They are bored. They don't like science and they don't even like art. If you ask what their favorite subject is, they'll say it is lunch and recess when they can go outside and play. And for several decades we have seen a decline in test scores and more students graduating with weak reading and math skills and minimal scientific and historical knowledge.

Yet the US does produce a large number of creative individuals. How is this possible?

What American culture does well is what it does *outside* of school. Here I agree with Michael Petrilli. After-school hours are busy with drama and chess clubs and sport and debate teams. American culture also has much parental involvement in music lessons, trips to museums and galleries, sports leagues, summer camps, and travel. And it is prosperous, with much wealth to support informal learning opportunities.

Music education is a good example. Everyone loves music, and American culture has much creativity in music—rock bands, jazz clubs, symphonies in most cities, and more. But that creativity didn't come out of music education in schools. Instead, those who become musicians and music enthusiasts are inspired from popular culture, learning from friends and families, or by lessons paid for by their parents.

All of this points to a challenge for education reform. Schooling currently has two major problems. It wastes much of its students' time, as measured by the students' self-reports of how disengaged they are. And it misses the

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opportunity to use its considerable resources to prepare young adults for entrepreneurial ideas and living.

Steve Jobs—who, in addition to his troubles in grade school, also dropped out of college—put the entrepreneurial aspiration best:

Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle. As with all matters of the heart, you'll know when you find it. And, like any great relationship, it just gets better and better as the years roll on. So keep looking until you find it. Don't settle. (Stanford Commencement Address)

So how can we re-focus the schools to enable students to take on that great life challenge? One element must be educating for entrepreneurship.

The Essentials of Entrepreneurship

The entrepreneurial process begins with an *informed and creative idea* for a new product. The entrepreneur is *ambitious* and *gutsy* and takes the *initiative* in developing the idea into a new enterprise. Through *perseverance* and *trial and error*, the entrepreneur *produces* something of value. He or she takes on a *leadership* role in showing consumers the value of the new product and showing new employees how to make it. The entrepreneur *trades* with them to *win-win* results, thus achieving *success* and *enjoying* its fruits.

Now let's see how each of these italicized terms relates to Steve Jobs.

Entrepreneurs generate business ideas and decide which ones are worth pursuing. In coming up with *informed, creative ideas*, entrepreneurs speak of vision, activeness of mind, and “thinking outside the box.” They speak of judgment: Which ideas are actually good ones? Can the product be developed technically? Will it sell? What does the market

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research show? Entrepreneurs exhibit a commitment to cognitive achievement—intellectual playfulness, research, experimentation, analysis, and judgment. As one venture capitalist put it, “Money does not get the ideas flowing. It’s ideas that get the money flowing.”

Steve Jobs was characterized by confidence in his creativity and judgment, and he tells us how he acquired it. His parents had moved with the adolescent Jobs to Los Altos, California, near the heart of Silicon Valley. Many of his neighbors were engineers who gathered in garage workshops after work and on weekends to talk and tinker with projects. Jobs’s father was a skilled mechanic who liked rebuilding cars in his spare time (*iCon*, p. 10). Across the street lived Steve Wozniak, whose father was an engineer at Hewlett-Packard. And the young Jobs played with do-it-yourself Heathkits. All of that, Jobs explained,

gave one the sense that one could build things that one saw around oneself in the universe. These things were not mysteries anymore. I mean you looked at a television set, you would think that, ‘I haven’t built one of those, but I could. There’s one of those in the Heathkit catalog and I’ve built two other Heathkits so I could build that.’ Things became much more clear that they were the results of human creation, not these magical things that just appeared in one’s environment. . . . It gave a tremendous level of self-confidence, that through exploration and learning one could understand seemingly very complex things. (Quoted in *The Pixar Touch*, p. 76)

Ambition is also characteristic of entrepreneurship—the drive to achieve your goals and be the best that you can be. Many people experience idle wishing—“Wouldn’t it be nice if I were rich and independent?” Ambitious individuals feel strongly the *need* to achieve their goals.

Steve Jobs’s quest to make his products “insanely great” speaks of a high ambition—and an ambition that embodied a strong integrity. Jobs used the analogy of a carpenter committed to the highest standards of his craft:

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When you're a carpenter making a beautiful chest of drawers, you're not going to use a piece of plywood on the back, even though it faces the wall and nobody will ever see it. You'll know it's there, so you're going to use a beautiful piece of wood on the back. For you to sleep well at night, the aesthetic, the quality, has to be carried all the way through. (*Playboy* Interview)

Entrepreneurship requires *initiative*. It's one thing to have a business plan; it's another to turn it into reality. Entrepreneurs are self-starters who commit to bringing their ideas into existence. The teenager Steve Jobs was trying to build a frequency counter but needed some sophisticated parts. So he telephoned Bill Hewlett, co-founder of Hewlett-Packard, at his home. Hewlett didn't know Jobs, but they talked for twenty minutes. Jobs got the parts—as well as a summer job at H-P.

Any entrepreneurial enterprise involves venturing into the unknown, a willingness to take on obstacles, and the possibility of failure. Consequently, entrepreneurship takes *courage*—the willingness to take calculated risks, to be aware of downsides while not letting fear dominate your decision-making.

Courage is closely tied to independence of judgment—not letting pressure from others override your own judgment. One of Jobs's teachers in high school, who taught the school's only course in electronics, noted Steve's independent streak: "He was usually off in a corner doing something on his own and really didn't want to have much of anything to do with me or the rest of the class" (John McCollum, quoted in *iCon*, p. 18).

Jobs himself later put it this way:

Don't be trapped by dogma, which is living the result of other people's thinking. Don't let the noise of other opinions drown your own inner voice. And most important, have the courage to follow your heart and intuition. (Stanford Commencement Address)

Bouncing Back

Success is rarely easy and overnight, so success usually requires sticking with it through difficulties and over the

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longer term. Entrepreneurs must *persevere* through the technical obstacles, in the face of the naysayers and their own self-doubts. And many entrepreneurs fail several times before achieving success.

The scope and number of Jobs's failures and his ability to bounce back are legendary. The Apple I and II initially sold modestly. The Lisa was a dud. Jobs was then kicked out of Apple. His new company, NeXT, failed. But he tried again, and he tried different approaches, culminating in a return to a struggling Apple. Even then, Jobs had to ask his great rival, Microsoft's Bill Gates, for a \$150 million investment. But the persistence paid off, and Jobs proceeded to transform Apple into a global titan—a rejuvenation rightly called (by Jeffrey Young and William Simon) “the greatest second act in the history of business.”

Jobs's long-term funding of Pixar also illustrates his perseverance. Pixar's model of digitally-animated movies lost money for years and was kept afloat primarily because Jobs believed in it and continued to fund it. Eventually, Pixar achieved technical and commercial success in movies such as *Toy Story* (1995), *Monsters, Inc.* (2001), and *The Incredibles* (2004).

The entrepreneurial development process is almost always *trial and error*, requiring that the entrepreneur make adjustments based on experience. Successful entrepreneurs respond to real-world feedback and can admit their errors. Steve Jobs's advice to himself and others (quoted by Bob Hill) was “Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations.” Jobs was regularly willing to abandon unsuccessful approaches, and his perfectionism made him require many iterations in product development before, finally, achieving the “insanely great.”

Productivity: When the development process culminates in a working product, the entrepreneur has added value to the world. Those who then transact with the entrepreneur, as customers and as employees, engage in *win-win trade*, exchanging value for value. Socially, trade is a process of deal-

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ing with others on a peaceful basis according to productive merit. The commitment of Apple's customers to their products, sometimes bordering on religious devotion, is a testament to Jobs's and Apple's success at win-win value exchange.

Entrepreneurs also bring *leadership* to the trade. They create something new, so they are the first to go down a new path. Those who go first set an example for others and, especially in the case of something new, they must show customers its value and teach employees how to make it.

Jobs spoke of leadership as a critical component of entrepreneurial success. "Innovation," he liked to say, "distinguishes between a leader and a follower." And, he argued, leadership is the ultimate in human capital: "Innovation has nothing to do with how many R&D [Research and Development] dollars you have. When Apple came up with the Mac, IBM was spending at least 100 times more on R&D. It's not about money. It's about the people you have, how you're led, and how much you get it" (*Fortune*).

Jobs's leadership record is mixed. There are credible accusations that he was often difficult to work with—he could be impatient and throw tantrums, he regularly used verbal abuse to get his way, and he sometimes outright manipulated people. Leaders, especially visionary leaders, have to handle great pressures and deal with less committed and competent people, so handling pressure and people gracefully is a key component of leadership.

Yet there's also Jobs's undeniable track record as a visionary whose charisma attracted many of the best and brightest, with whom he maintained long-term relationships, and whose methods, positive and negative, did motivate people to accomplish much more than they thought possible.

Finally, the entrepreneur experiences *success* and the *enjoyment* of success. Success yields both material and psychic rewards—the goods that money can buy and the experiences of independence and security that go with it. There is also achievement's psychological reward: enhanced self-respect and the sense of accomplishment.

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One small anecdote speaks charmingly to Jobs's ability to enjoy his success. In her eulogy for Steve, his sister Mona Simpson tells us: "He told me how much he loved going to the Palo Alto bike store and gleefully realizing he could afford to buy the best bike there. And he did" ("A Sister's Eulogy").

To summarize the above, let's put into a table those traits exhibited by entrepreneurs in general and Jobs in particular:

<i>Entrepreneur Success Trait</i>
Knowledge and creativity
Ambition
Courage
Initiative
Perseverance
Trial and error experimentalism
Productivity
Trade value for value
Leadership
Experiencing and enjoying success

What Schools Could Do

If entrepreneurship involves the exercise of certain traits, where do those traits come from? Can formal schooling instill, develop, or at least enhance those characteristics in students? If we take entrepreneurship as a lens for education, then can we teach creative exploration, courage, initiative, and the other essential qualities?

If we contrast much traditional and current schooling, what do we see? We don't see much uniqueness, activity, or experimentalism. Students sit in straight rows of desks.

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They do what the teacher and textbook say. *Every* student does the *same thing* at the *same time* in the *same way* and takes the *same standardized tests*. That is, we see uniformity, obedience, passivity, and rote learning. So while there is useful knowledge in the curriculum, the embedded lessons students also learn are: *Do what the authorities say, Do what everyone else is doing, and The correct answers are pre-set and already known.* (And we sometimes wonder why we have so many unmotivated, dependent, and timid students—or students who, out of sheer boredom and the chaotic need to be themselves, rebel in destructive ways.)

So if an explicit goal of education is to cultivate entrepreneurship, as a first step let's consider getting the students out of the rows and letting them interact with prepared materials on their own.

I have three suggestions. One is for us educators to fill in this table with exercises appropriate for children of different ages.

<i>Entrepreneur Success Trait</i>	<i>Educational exercises</i>
Knowledge and creativity	
Ambition	
Courage	
Initiative	
Perseverance	
Trial and error	
Productivity	
Trade value for value	
Leadership	
Experiencing and enjoying success	

Take courage as one example.

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Courage is the virtue of acting as you judge best despite fear. Fear comes in many forms—of pain, of disapproval, of feeling like a failure, of loss of love, money, and so on. Life involves many risks, so having the character to handle risk is an important part of success. One direct connection to entrepreneurship is the many people who do not attempt it due to fear.

So one thread within entrepreneurial education is to develop formal exercises that embody risk and help a child learn to manage it.

Younger children learn skills that involve *physical* risks: going down a slide, jumping into a pool, learning to ride a bicycle. Such activities and dozens more can be formally identified and introduced in schools as exercises. They can also be scaled up as children mature. Eventually, they will be able to handle mixing chemicals, climbing rock-walls, and driving cars.

Other risks are more *psychological*. For younger children, these can include greeting and conversing with new adults whom your parents have invited for dinner, raising your hand to ask the teacher a question, or expressing an opinion different than your classmates'. Again, exercises to model these can be introduced and scaled up as children mature so that eventually they can handle giving a speech before a large audience, asking someone for a date, and arguing civilly about political and religious differences.

And what holds for developing courage also holds for developing initiative, experimentalism, perseverance, and the other success traits.

A second possibility is to explore further the Montessori approach to education. Maria Montessori opened her first school in Rome in 1907, and for over a century her method has spread, mostly as a grassroots phenomenon, all over the world. The scholarly literature is beginning to study Montessori's results systematically and to judge them positively, but for now let's note two indicators.

Anecdotally, Montessori advocates note that four leading entrepreneurs of our generation—Larry Page and Sergey Brin of Google, Jeff Bezos of Amazon, and Jimmy Wales of

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Wikipedia—were Montessori-educated (“Google Founders Talk Montessori”).

More formally, Hal Gregersen reports a striking statistic. After interviewing a large number of entrepreneurs, Gregersen notes:

It’s fascinating when we interview these famous entrepreneurs to realise that they grew up in worlds where adults paid attention to these innovation skills. Most often these adults were parents and grandparents, but in about *one-third* of the cases they were master teachers at Montessori or Montessori-like schools. (Quoted by Nicholas Bray, italics added)

A third option is to learn from supplemental programs that explicitly tie education to entrepreneurship. Two examples are the Network for Teaching Entrepreneurship (NFTE) and Junior Achievement (JA), both with many chapters in the US and other countries.

Steve Mariotti, founder of NFTE, began teaching at one of New York City’s worst public schools. He used traditional methods but found that they failed to teach the students anything. Then he realized that children, especially poor kids, are often fascinated with money but know nothing about how to make it. So, using his own entrepreneurial experience, Mariotti changed his methods and explicitly began teaching students how to start their own businesses. Their attitudes altered dramatically. Their profit motive kicked in, and they began to see a realistic potential for a better life. Thinking about business led them to see the need for other skills—reading, writing, math, and social—and they became motivated to learn from their textbooks and other teachers. Students in Junior Achievement have achieved similar results in Argentina, as reported by Eduardo Marty.

Dirt Bikes and Dads

How many children with Steve-Jobs potential have been stifled by anti-entrepreneurial schooling? How many future en-

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trepreneurs creating insanely great things could be nurtured by a re-focused, entrepreneurial education?

Beyond that, let's not overlook the role that parents can play. Here's something I observed in my own neighborhood, which I think captures the heart of education.

On my drive home from work I passed regularly some vacant land upon which kids with their bikes had created paths and piles of dirt to jump over. Over time, their efforts became more elaborate. They built crude ramps with wood (likely stolen from nearby construction sites), dug shallow pits and let them fill with water, and extended the crisscrossing network of riding paths. I confess to some envy—being a middle-aged man who wanted again to be a kid out there riding my bike up the ramps and jumping the puddles.

But what really caught my attention was an evening when there was suddenly much more activity at the dirt bike site. The fathers had gotten involved. So I stopped my truck and went to watch. The ramps were now sturdier, and the activity was organized. Kids with bikes were lined up at one end of a long stretch of path, and each kid would ride his or her bike fast up and over the ramp and fly through the air as far as possible.

That wasn't all. One of the dads had a radar gun that measured how fast each kid's bike was going when it hit the ramp. Another dad, working with one of the kids, measured the distance of each jump and recorded it in a notebook. And all of the kids were now wearing helmets. But each kid wanted to know how far he had jumped, how to improve his distance, and as they waited their turns they were discussing the best air pressures for the tires, bike speeds and ramp angles, lubrication for their bike's gears, and more.

The point for entrepreneurial education is that the kids first showed initiative and pursued their interests. The adults got involved and both encouraged that initiative and facilitated a more structured activity. The kids were learning math and engineering, co-operation and competition, being creative and getting exercise—and having a whole lot of fun themselves and with their dads.

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That's just one story, though it points to a path for entrepreneurial educators to pursue. What some kids and their dads can do with a vacant lot and some creativity—we professional educators with our training and resources should be able to do even better.