Sustainable Industry Creation:  
A Case Study of Patagonia and Organic Cotton

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This paper examines how Patagonia, “The Coolest Company on the Planet” (*Fortune* cover story, Casey 2007), pioneered organic cotton and helped to establish a whole new organic-cotton industry. Based on documents and interviews with the key players, Part 1 describes this innovation and how it spread to create a new industry. Included in this section are the challenges the innovation faced, both within and outside Patagonia, and how these challenges were met.

Part 2 of the paper explores the extent to which the case of organic cotton at Patagonia is explained by existing theories of innovation and change. We consider both traditional theories and newer perspectives, including sustainable development and corporate redesign. The former include the theories of Beer et al. (1990) and Kotter (1995) on change management as well as those on the diffusion of innovation by Rogers (1962, 5th edition 2003), and the extension of this work to crossing the chasm by Moore (1991) and to tipping point by Gladwell (2000). The newer perspectives include system-wide design for sustainable development by Pearson (2006) and the work on corporate redesign (2008). Finally, we consider Intentional Change Theory (ICT) by Boyatzis (2006).

Two terms in the title of this paper deserve definition at the outset. “Sustainable” refers to environmentally-responsible processes and products that meet the needs of the present generation without compromising the ability of future generations to meet their needs. A “case study” is typically associated with teaching and exploratory research but, as Yin (1984, 2003) has pointed out, it can also be used as a research design for theory development and testing via *analytical* generalization:

> Critics typically state that single cases offer a poor basis for generalizing... *This analogy to samples and universes is incorrect when dealing with case studies.* This is because survey research relies on *statistical* generalization, whereas case studies (as with experiments) rely on *analytical* generalization. In analytical generalization, the investigator is striving to generalize a particular set of results to some broader theory (Yin, 1984, p. 39, *emphasis is in the original*).

In this paper we first describe how the actions of key individuals and key companies led to the formation of the nascent organic cotton industry, and then examine if this research case study can be analytically generalized to a range of traditional and newer theories that are available to explain this phenomenon. We begin with a brief introduction to the problems of conventional cotton versus the promise of organic cotton, followed by some background information on the organic cotton market and its key players.
Conventional versus Organic Cotton

The environmental damage from cotton as grown traditionally has been well documented. As summarized in the *Directory of Organic Cotton and Organic Cotton Products* (PAN Germany 2007):

Cotton provides about half of all global fibre requirements... It is an important source of income for millions of small farmers and contributes significantly to the national economy of many developing countries... Conventional cotton is very prone to insect attacks and large quantities of the most toxic insecticides are used in its production. Cotton accounts for about 25% of the global insecticide market by value and about 10% of the pesticides market. The intensive use of toxic insecticides and other toxic chemicals in cotton has caused serious health and environmental impacts, including farmer and farm worker poisonings, water contamination, and bird and fish kills.

The first serious attempt at organic cotton production began in Turkey in the late 1980s by a European cooperative called the Good Food Foundation (Myers and Stolton 1999, p. 5). As these authors explain:

Many define organic farming by a simple formula: No synthetic fertilizers + no synthetic pesticides = less yield x higher price. Such an approach, experience has shown, can still lead to unsustainable farming systems. Organic farming is better defined by a formula such as: The use of locally adapted varieties + the reduction of nutrient losses + the use of locally available organic material and green manuring + a wide rotation + fostering natural balances + mechanical and manual weed control = no need for synthetic inputs (p. 22).

Transforming a cotton crop into a textile fabric involves many stages of processing, often in a number of different countries, with a variety of skills and technologies... There are environmental impacts at each stage of the cotton textile lifecycle which vary according to how the fibre is cultivated, the way the fabric is made and how it is used... all these factors must be taken into account and plans made to reduce the total environmental impact (p.45).

Given the size of the global cotton industry’s $300 billion environmental “footprint” (Gunther 2006), the interest in organic cotton and the growth of this nascent industry has been supported by farmers trying to avoid toxic chemicals, enlightened companies striving to be environmentally-responsible and seeking competitive advantage from using organic cotton, and informed consumers calling for greater social and environmental accountability.
The Organic Exchange (OE), a non-profit whose mission is to spur the adoption and use of organic cotton, estimates that global retail sales of organic cotton products grew 83% in 2007 to $1.9 billion, and 63% in 2008 to $3.2 billion. Despite these impressive growth estimates, the organic cotton industry is still only about 1% of the conventional cotton industry. According to OE’s research, the top five brands and retailers with the largest organic cotton programs in 2008 were: Wal-Mart (USA), C&A (Belgium and Germany), Nike (USA), H&M (Sweden), and Zara (Spain). The top ten brands and retailers accounted for 67% of all global retail sales.

OE’s Organic Cotton Market Report for 2008 also indicates that the top five countries producing organic cotton were: India (51%), Syria (19%), Turkey (17%), China (5%) and Tanzania (2%). The top five accounted for 94% of the world’s organic cotton production.

Cotton grown organically is more labor intensive (for example, instead of mechanical picking after an aerial spray kills all the leaves, the cotton is picked by hand) but it does not require expensive pesticides either. That is why the top producers of organic cotton today are the developing countries (which have the right soil and weather conditions) where the labor costs are relatively low and where many farmers cannot afford to buy or finance the purchase of expensive productivity-boosting pesticides.

The documents and interviews for this research indicate that Patagonia was a pivotal company in the development of the organic cotton industry, particularly in the USA. Coop in Switzerland appears to have similarly influenced the development of this new industry in Europe, but we did not investigate this.

Our coverage of market developments in the USA is not comprehensive, but we were able to learn how Patagonia became interested in organic cotton, how it committed to using organic cotton in its products, and how it influenced others to do the same (see Figure 1 for a schematic of the influences we were able to trace). We also encountered two companies that made organic cotton products but failed, and their experience offers a valuable contrast for analytical generalization.

PART 1: THE RESEARCH CASE STUDY

In this section, we quote extensively from the documents we collected and the interviews we conducted for this research case study on Patagonia and its influence on the organic cotton industry. The reader thus has access to the primary data for this research and can judge whether or not the inferences and conclusions we draw from these data in Part 2 of the paper are persuasive, and also ask if better explanations are available for these findings. For, as Yin (1984, p. 59) has advised:
The detective role offers some rich insights into case study fieldwork. Note that the detective arrives on a scene after a crime has occurred and is basically being called on to make inferences about what actually transpired. The inferences must be based on convergent evidence from witnesses and physical artifacts... All the preceding conditions will be negated if an investigator seeks only to use a case study to substantiate a preconceived position... To carry out a good test, every investigator should report the preliminary findings—possibly while still in the data collection phase—to two or three critical colleagues. The colleagues should offer alternative explanations and suggestions for data collection. If the quest for contrary findings can produce documentable rebuttals, the likelihood of bias will have been reduced.

**Events Prior to Patagonia’s Switch to Organic Cotton**

Heidi McCloskey, Director of Communications at Organic Exchange, spoke about her experience with organic cotton at Esprit prior to Patagonia’s switch to organic cotton:

I joined Esprit in 1992. eCollection had just been launched and it was an amazing concept—organic only, minimal processing, focused on social and environmental innovation. It was the first stylish collection of knits and woven’s with organic cotton. In those early days for organic cotton, there was us and there was Patagonia. Owear was sold to Vanity Fair but then they closed that line. There was Coop in Switzerland but we did not deal with them.

There was consumer interest in organic, but it was more of a flash trend. It seemed cool, but people got tired of seeing the same colors. We were not able to produce the kind of fashion pieces the market wanted. So people got bored. And that was it. So there was a quick upsurge in the market with farmers planting organic and then, when the trend went away, they had to sell all that organic cotton at conventional cotton prices. And I think there was a huge amount of mistrust between the farming communities and business—big or small, everybody was big business and no one could be trusted.

The annual sales for eCollection were about a couple of million dollars when I left Esprit in 1995. They let me take all my research on textiles, on lab-testing protocols, they let me take it all. You put all your heart and soul into something like this—it was like putting myself through textile school—so of course I wanted to keep that and they said sure no problem, we don’t want anything. I didn’t know I was going to Nike then, but when I joined them I had all this information and could get them up to speed faster than I would have been able to do otherwise.

I remember helping Patagonia convert to organic cotton, and I have known Jill (Dumain, Patagonia’s Environmental Analysis Director) since around 1992. And for many years after that, up until we launched Organic Exchange in 2002, if you
wanted to get into organic cotton, you had to know Jill Dumain, La Rhea Pepper, Daniel Sanders, me—you needed to know very specific people in order to get any kind of idea about how to launch organic cotton in your company.

We created Organic Exchange to diffuse the information, make it publicly available, so that if we were wiped out by an unfortunate disaster, all of the information would still be there. And you could go to our website and find a treasure trove of information on organic cotton. Not all companies were willing to share their information with competitors and have their numbers called out and attributed to them. So we needed an organization that could act as a third party. This allowed companies that were unwilling to disclose specific information a more anonymous way to contribute that information so that we could provide a more comprehensive picture of the industry.

**Patagonia’s Switch to Organic Cotton**

*As Fortune* reported in its cover story on Patagonia and its founder Yvon Chouinard (Casey 2007, p. 67):

Conventionally grown cotton was especially heinous. Heavily dependent on noxious pesticides, insecticides and defoliants, it’s an environmentalist’s nightmare crop. “To know this and not switch to organic cotton would be unconscionable,” Chouinard says. In 1994 he gave his managers 18 months to make the change. Given that organic cotton, rare at the time, cost between 50% and 100% more, and that a fifth of Patagonia’s business came from cotton products, this was no small risk. There was pushback from the ranks; suppliers defected. Chouinard delivered his ultimatum: Do it, or we will never use cotton again. The gamble paid off. Patagonia’s cotton sales rose 25% and, more important, established an organic cotton industry so that other companies can cross over. Demand grew and prices decreased, leading to even more demand.

The challenges Patagonia faced in switching to organic cotton are documented in a published case study on the company (Reinhardt et al. 2003, pp. 25-27):

Organically grown cotton had the same environmental impacts (as conventionally grown cotton) in all stages, except for the cotton growing stage... Many of Patagonia’s fabric vendors refused to switch to organic cotton, citing lack of supplier alternatives and skepticism about the market potential. Patagonia’s staff had to go back to the beginning of the supply chain to identify cotton brokers with access to organic cotton... Patagonia’s fabric sourcing specialists found that little certified organic cotton was grown either within or outside the United States... Farmers wishing to grow organic cotton faced considerable obstacles. Growing organic cotton required more labor and additional skills; for example, a farmer had to monitor plant and soil health more closely.
This published case study also documents how Patagonia was able to deal with these obstacles and successfully switch to organic cotton (Reinhardt et al. 2003, pp. 25-27):

VP of Environmental Initiatives Jill Zilligen explained: ... “Going completely to 100% (organic cotton) was difficult and a scary thing to do... but it helped knowing that our technical shells and other products would continue to support the company even if we floundered for a while in organic cotton... being privately owned also played a role... if we were publicly owned we might have had to add a blending program (3% organic cotton blended with 97% conventional cotton, for example, as others who followed Patagonia later did)”... Patagonia had to pay two to three times more for its organic cotton fabric in spring 1996 than it paid for conventional cotton in spring 1995.

Two decisions facilitated product development. First, Patagonia decided to use “transitional” as well as certified organic cotton. Transitional cotton was grown using organic cotton practices, but on farms where the practices had not been in place long enough for certification to be earned. Second, Patagonia decided it would “not sell organic clothing, but rather clothing made with organically grown cotton.” This meant, for example, that Patagonia could continue using synthetic dyeing technologies; natural dyes did not meet Patagonia’s quality standards and had their own environmental problems.

Yvon Chouinard offered his perspective for our research:

How did we hear about organic cotton? Well, Owear first tried it and it was then acquired by Vanity Fair, which gave it the funds to develop the concept, including organic dyes. It was a radical idea and it sort of looked like macramé. It failed. Then my good friend Doug Thomkins, CEO of Esprit, tried it. They also tried to eliminate chemical dyes. It was a small subset of their line (the eCollection) and it was “hippie like.”

Back then no one knew the damage caused by conventional cotton. We went to California’s Central Valley to see for ourselves. We were shocked to see the guys with shotguns at the water pools shooting to keep the birds landing on the toxic pools. Nothing was alive out there. High cancer rates for workers—it was terrible. I came back to the company and mandated that 18 months later we would go 100% organic.

We had to change everything. We didn’t know how to do it. Basically we had to learn to make clothes again. This was 1993-94. We had to buy futures from farmers, basically guaranteeing their crops. We had to learn how to clean the gins and to spin the yarns (which was not as clean as conventional cotton). Quality was
not good in the beginning. One group learned to freeze the fibers so the sticky bugs would fall off.

25% of our revenue was cotton so we were taking a big leap. It took a few years to re-gain the loss of revenue and profit. We had to drop many styles because we could not get the quality we needed with organic cotton.

Jill Dumain, Patagonia’s Environmental Analysis Director and Chair of the Board of Organic Exchange (a non-profit organization committed to expanding organic agriculture) also offered her perspective for our research:

There was quite a discussion in 1994-95 about how to market organic cotton. The organic movement was still really small. We almost called it non-conventional cotton! Patagonia did a survey around then with our customers and we found out that consumer awareness was very low. Some of the comments were along the lines of “Why organic cotton? I don’t eat my jeans!”

I got together with Heidi McCloskey to learn from her experience with organic cotton at Esprit and we exchanged notes. The first sales meeting where the training about organic cotton actually took place was in spring 1995. It was the first time that the “sales talk” was passed on. No one really knew if the consumers were going to buy it. The only examples of companies that had done it were Owear, which was purchased by VF, and Esprit. Esprit went deep and narrow—they looked at dyes, the chemical waxes and other low impact methods. Both of those collections were failures. In fact, the Esprit suppliers that we tried to use were not very enthusiastic about continuing with organic cotton. We had best results when Patagonia converted existing suppliers.

Our core customers loved organic cotton but the majority of the dealers (and ultimately the customers who purchased it) did not even realize that it was organic cotton. The price change was not enough for the customers to even know that something was different.

The main factor in getting the style count up was not just availability of organic cotton but also the process of figuring out the correct applications of yarns (long staple vs. short). A couple of years after we set up mini production facilities to do organic cotton, they turned into a huge asset because Patagonia could now try new and innovative things and our competitors did not have that elasticity.

Influence of Patagonia and Others on the Nascent Organic Cotton Industry

According to the published case study on Patagonia (Reinhardt et al. 2003, p. 27):
Patagonia’s marketing team had three goals for its spring 1996 organic cotton line: sell the line successfully; influence the apparel industry to increase its use of organic cotton; and precipitate growth in organic cotton farming. Patagonia felt that the latter goals were contingent on the first...

To encourage other apparel firms to use organic cotton rather than conventionally grown cotton, Patagonia shared information with other apparel firms on the organic cotton business. According to VP of Production Julie Ringler: “We are extremely open with anyone who wants to find out more about organic cotton, offering advice to Marks and Spencer and Nike, for example. It goes with our mission statement. We are not large enough to sustain the business... We need more people doing organic, to bring the other companies on board so that there will be more growers.”

As Patagonia’s Jill Dumain recalled in our interview:

Early in the 2000’s, after some of the bigger players such as Nike started to get into organic cotton, the reporters would call us and were surprised that we had been doing it since 1996. Organic cotton really got traction only when the bigger players started marketing it. Another key influencer in the early years of organic cotton was the European retailer Coop Switzerland. Patagonia and Coop were known to “keep the movement going forward.”

One of the authors of this paper (Michael Crooke) was CEO of Patagonia from 1999-2006, and according to him:

When I was at Patagonia in 1999, we were the largest users of organic cotton in the world. And the next year Nike did a half of one percent organic cotton blend (with 99.5% conventional cotton). Other companies went into organic cotton and did not sustain it. Then, the next big thing as I know it—one person’s view of the world—is that Target started doing organic cotton. And that’s when Wal-Mart took notice. And once they do it big time, that’s when it becomes mainstream.

Patagonia’s Jill Dumain mentioned the impact of a network conference that she helped to organize:

Patagonia held a conference in the early 2000’s where we invited suppliers and competitors. The idea was to get this sourcing information out to as many people as possible for environmental reasons. Many companies, such as prAna, first learned how to make organic clothes, and learned of the sources, from this conference.

Beaver Theodosakis, co-founder and co-owner of prAna, recalled this conference and its impact on his company:
Pam and I founded PrAna in 1993. In 1999-2000 we started asking how we could do more with the eco-friendly ideas on which we started the business but which had to be put on hold somewhat to get the business to a point where it was sustainable in a financial sense. Then the folks from Patagonia called and invited us to this conference in Ventura for Organic Exchange that 70 other people were attending, from organic cotton farmers to vendors who make clothing for other brands like us.

Within the first hour of the three-day conference, light bulbs began going off for Pam and I. We were like, this is it! That door opened for us and we were prepared and ready to walk through it. The resources were so clearly available and we could watch companies like Patagonia and see what they did. We were so inspired by that. And we said, this is our chance. We exchanged tons of business cards and immediately got connected. We could switch 19 of our conventional cotton styles to organic cotton just on our three-hour drive home from Ventura. We were on the phone the whole time with our design department! We swallowed the margin difference obviously, because organic was much more expensive.

It felt so right for us to make that switch. Since then, going on eight or nine years now, we are up to 163 styles made with sustainable materials, which include organic cotton, recycled polys, and hemp. People are coming to us with all kinds of great ideas. When we choose and design a fabric now, performance is important, price is important but one of the headlines for our design department when it comes to creating products is, is it a sustainable source, an eco-friendly source?

Today, on a landed cost basis, organic cotton is 8-20% more expensive than conventional cotton, and we are able to recover more than half of that via higher pricing. But we usually end up taking a lower profit margin to keep the price points for organic clothing within reach.

PrAna’s co-founder Theordosakis explained how a company’s vendor, who learned about organic cotton from him, then began supplying the surfing industry as well:

We shared with our vendors. We talked to Vivek, the owner of Indus-Tex in India, our woven shirts manufacturer. I sat him down—it was around the year 2000—and talked to him for two hours, showed him all the stuff on organic cotton, and he said he was very interested but he did not know where to get it for us. I said, look—and we said this to twenty other vendors—this is where we are headed if you want to be a long-term vendor for us. We feel that this is a trend, we have seen other great companies doing this, and we want to share all our learning with you. So we inspired our vendors to join us on this path.
Vivek, the Indus-Tex owner, found a source in China for that first season for us, and then he asked, “Hey, can I share this with other companies? Can I tell the surf industry that we now have organic cotton?” We said, absolutely, that is the whole idea. So I think he went to Volcom and inspired their Verde line, which is their green line, which they launched two years later based on their ability to get organic cotton through a trade vendor they already dealt with. But you should get the facts from Vivek. Three or four years later, we are starting to see Quicksilver and other players in the surf industry adopt organic cotton. And it came, I think, from the influence of great companies like Patagonia but also from the trade side where it was made available. It was like it was earlier for us—okay, so this is how you connect the dots. It wasn’t some mysterious thing.

We did not contact Volcom, Quicksilver or other players in the surf industry for this research, but prAna’s Theodosakis believed that industry would have a big impact on the diffusion of organic cotton to youth culture:

The surf industry is very influential with youth culture. These young people may know nothing about organic cotton but they are seeing and buying these green lines from brands they respect. The athletes are wearing this stuff—these athletes are on a pedestal for these youth—and so they are getting these hit signals, and it is not from mom and dad, and it is not someone preaching to them. To see these brands that they trust go in this direction is very powerful.

We did follow up with Vivek of Indus-Tex (prAna’s woven shirt manufacturer in India) for this research and he told us:

I got this inspiration (to pursue organic cotton) because I have two young children and we keep reading about global warming etc. and how harmful it is for the environment. So for the textile business, which is what we are in, I thought about what we could do to contribute to society. So I began going on the web and reading about organic cotton. And I found that in India organic cotton was being grown in a few pockets in certain areas. So I got involved.

We started producing fabrics with organic cotton in a small way about seven years back, in 2002. The first step was to convince the spinning plants to start spinning fabric with raw organic cotton because the staple is shorter than for conventional cotton. So it was a bit of a herculean task in the beginning because we had to convince a lot of people to do this. Organic cotton requires more laborious work, from farming to spinning. In the mills, where we weave and dye the yarn, they had already put up the effluent treatment plant, so that was taken care of.

But the main thing was to try and convince the customers who have the passion and want to market organic cotton fabrics and products worldwide. That was
definitely a very big challenge because the fabrics and the apparel do become more expensive with organic cotton.

I cannot say that we introduced organic cotton to the surf industry because they were already buying from China. But yes, we were the first to supply them from India. Today, in the surf brands, we are manufacturing for companies like O’Neill, Volcom, Hurley, and Quicksilver. In outdoor, we are supplying Northface and prAna. We are also making clothes for Guess, Calvin Klein, Levi’s, and Wrangler and Lee in Europe but not in North America. In the U. S. Wrangler and Lee is all going into Wal-Mart, but in Europe they are in higher end stores and we do supply them there.

Initially in India, around 2002, we were among only three or four firms manufacturing organic cotton garments. Now there are many others. Today the cost of producing organic cotton garments is about 10-20% higher than conventional cotton, depending on the yarn we are using, because the finer we spin the yarn, the more expensive it becomes. We are able to recover about 60-70% of the higher cost via higher pricing. We take the margin hit for two reasons. First, it’s the passion. And second, it is a marketing cost that we will be able to recover very well once organic cotton catches on in the world. So we view this as an investment that will pay off in the long run.

Today organic cotton is just 5% of the cotton production in India. But more and more farmers are moving into organic cotton. Initially, the farmers were very apprehensive, so we had to convince them and guarantee their income. Then only would they grow it on two or three of their ten acres to see what would happen. But now that they find that they are able to get a fairly good return on it, they have started to grow more and more of it. So, with the passage of time, you may see around 10% of the cotton land being used to grow organic cotton.

Nike

According to the published case study on Patagonia (Reinhardt et al. 2003, p. 27):

In 1998 Nike debuted apparel containing 3% certified organically grown cotton blended with 97% conventionally grown cotton, producing nearly 4 million T-shirts for fall 1998... Nike’s target was for all its apparel worldwide to have a minimum of 5% certified organically grown cotton by 2010.

At the time of this writing in mid 2009, Nike appears to be on track to reach that target for 2010. As the OC market report cited earlier indicates, Nike was the third largest user of organic cotton in the world in 2008, behind Wal-Mart and C&A. Heidi McCloskey, Director of Communications at Organic Exchange, recalled how she helped to introduce organic cotton while at Nike:
My first six months at Nike, I was given an assignment on water quality to see how I did, and how successful I could be within Nike. That’s just how big companies are. So I worked with Gap, North Carolina State University, U. S. Environmental Training Institute, and a number of other organizations.

And then they said to me, please look at cotton now. So I worked on that and made a very edgy, very controversial presentation to our major T-shirt manufacturer and to our U. S. textiles and apparel department. And we chose one vendor, four T-shirt silhouettes, for one year at 3% blend. We did about a million dollars on that—Patagonia was still larger than us in organic cotton.

Then we upped the percentage to 5% blend, and then 100% organic on some lines. But there was no consumer pull at all. There was no nothing. I had to fight tooth and nail every step of the way and look at indirect cost, and what does it cost for health care, and water clean up, and what if there came a time when we would be held accountable for all the costs of doing business, all of them—all the clean up, all the environmental remediation, everything. What would it cost?

I had to work with a marketing professional to teach me the language of all these different executives in a compelling, non-zealot like way. I worked with him for two and a half years and just kept moving and moving and moving. I had our finance people running what-if scenarios. If the price of oil changed to this, what would that do to the price of polyester and nylon? If we changed X% of our total cotton purchase to organic, how many vats, how many swimming pools, of pesticide would that get rid of? So I had to make it super gross and visual without it being zealot-like.

And, let me tell you, I had to hold hands in prayer in Texas (with organic cotton farmers) to get anyone to trust me to do organic. Because I was not only associated with Esprit—and all that organic cotton that had to be sold at conventional cotton prices when that market trend got reversed—but now I was part of an evil empire! Then we had an issue with tributyltin, and it was quite providential for organic cotton.

As reported in the Business Section of the New York Times on January 7, 2000:

In what could prove a damaging blow to Nike’s image in Germany, leading German retailers yanked soccer jerseys made by the company from store shelves yesterday after televised reports that the jerseys contained a potentially harmful fungicide used on boat hulls.
The reports claimed that the chemical, tributyltin or TBT, had been found in souvenir jerseys made by Nike with the name and logo of Borussia Dortmund, a popular professional soccer team.

Tributyltin is used to kill bacteria in textiles and is an ingredient in paint used on ships' hulls to discourage barnacle growth. It is strongly irritating to skin and can cause burns. At high levels, it can cause nerve and liver problems.

To continue with what Heidi McCloskey told us about this incident:

I had been talking about the need for a restricted substance list and getting pushback from legal and then this happened. We had soccer teams asking, are you trying to poison us? I was able to get us out of that mess. I hired toxicologists, hired chemists, and then those pushing back were able to see that there are pesticides that are on restricted substance lists globally; that there are things in legislation that we need to pay attention to. So if we took responsibility for it and did it in a way that we could control it, be innovative with it, as opposed to being forced to do it by law, that is a hell of a lot better than having to just comply with something like everybody else.

Today Nike has the “considered” line that sets the bar on organic cotton that all other lines are expected to follow. They are now at 11.8 million pounds (of organic cotton) per year, in third place behind Wal-Mart and C&A.

Wal-Mart

Patagonia’s influence on Wal-Mart is mentioned in the Fortune cover story (Casey 2007):

In 2006, Wal-Mart became the world’s largest purchaser of organic cotton. You would think this would make Chouinard (Patagonia’s founder) happy. And it does, to a point. He’s ecstatic over Wal-Mart’s green initiatives. But when executives from Sam’s club came to Ventura last month to meet him, he told them they needed to go further. “Even organic cotton is bad,” he says. “It is better to make clothes out of polyester if you can recycle them into more clothes—like we do with aluminum cans (p. 67)... Chouinard has the ear, and respect, of Wal-Mart (p. 70).

In Yvon Chouinard’s own words from our recent interview with him:

Wal-Mart is the world’s 11th largest economy. They came here first many years ago under Lee Scott. Recently (in October 2008), I gave a keynote speech to their 1200 buyers on the importance of environmental and social responsibility. It is now mandated that their buyers take into account the social and environmental aspects of all their vendors. Their new CEO (Mike Duke) said to the group, “If you think Lee Scott was an environmentalist, wait till you get to know me.”
What’s next? They need to know that organic cotton is not a good crop to grow. It uses too much water. It would be better to use recycled materials. Patagonia must stay out in front and lead. I told them to think about value—not just clothes. Vegetables, for instance—if organic vegetables are 70% more nutritious then they should be selling organic veggies.

How does it feel to have Patagonia inspiring so many businesses to think differently? It feels good. Influencing Wal-Mart is one of our top achievements.

According to Gunther (2006), in addition to Patagonia, Wal-Mart was influenced not only by CEO Lee Scott but also by a Wal-Mart buyer named Coral Rose:

A native of southern California, Rose buys organic food, wears organic clothes and uses all-natural cleaning products for her home. “I’ve lived an organic lifestyle for about 15 years,” says Rose. Both her parents died of cancer; that will get you thinking about chemicals in the air, water and food... In the spring of 2004—before Wal-Mart launched its sustainability initiative—she placed an order for organic cotton yoga outfits for Sam’s club... The pastel colored yoga tops sold for less than $10, the loose-fitting pants for less than $14. They were a big hit—about 190,000 units sold out in 10 weeks.

That got Lee Scott’s attention... It was an early sign that Wal-Mart’s working class and middle-income customers would be willing to buy “green” products, so long as they were affordable.

As reported in the published case “Wal-Mart’s Sustainability Strategy” (Denend and Plambeck, 2007a):

(CEO Lee) Scott initiated a review of Wal-Mart’s legal and public relations challenges in 2004. One area that the company wanted to evaluate was its environmental impact. “They were looking for help defensively from a strategic standpoint—‘where are we vulnerable?’” explained Jib Ellison, founder of Blue Sky Sustainability Consulting. However, Ellison had bigger ideas for how Wal-Mart could profitably reduce environmental impacts, which he pitched to Scott in June 2004. The basic proposal was that Wal-Mart could differentiate itself from the competition, maintain a license to grow, and remain consistent to its commitment to serving customers through everyday low prices by pursuing an offensive strategy. “Sustainability represents the biggest business opportunity of the 21st century,” said Ellison. In addition, he asserted that Wal-Mart and its complex supply chain could become more efficient by making its operations more environmentally friendly. Intrigued by the idea, Scott hired Blue Sky to perform an environmental impact assessment and to consult with Wal-Mart on how it might launch such an initiative. Ellison recalled, “I said to Lee, ‘If you really want to take
on sustainability with a capital S, it’s not just the environment. It’s healthcare, it’s wages, it’s ethical sourcing, it’s globalization. Everything.’ And he said, ‘Yes, but let’s start with the environment.’” (pp. 3-4).

We interviewed Jib Ellison for this research and he offered the following perspective:

Organic cotton, because it is a certified product that is acknowledged by the customer as a higher quality product, is definitely on the radar screen at Wal-Mart (and not just a dot in the picture and being carried along in the company’s sustainability drive). I can’t obviously speak for Wal-Mart, but I believe they will continue to play a leadership role in getting organic cotton products to their customers. And I think they have become more sophisticated than they were early on that organic cotton—while it is a better choice than conventional from a sustainability standpoint—is not automatically the right answer. For example, growing it in an area that does not have water is not a good idea. So having cotton that is certified organic does not a sustainability solution make.

As far as where organic cotton fits into the big picture of the sustainability drive at Wal-Mart, early on it was a point of entry for the apparel organization to really get behind something and make a difference. Today, much like at Patagonia, they are looking across the entire value chain and it is part or a broader and quite frankly a better orientation.

As the published case on Wal-Mart’s sustainability strategy states (Denend and Plambeck, 2007a):

The company went to work on defining specific sustainability teams to drive environmental improvements related to energy, waste, and products. Ultimately, 14 sustainable value networks were defined (including sustainable buildings, green house gas, and global logistics for energy networks; operations, procurement, and packaging for waste networks; and China, electronics, food and agriculture, textiles and other specific areas for the product networks, with organic cotton and Organic Exchange cited as opportunities and resources for the textile network). (p. 5, p. 31)

An executive sponsor was identified for each network, as well as a network captain. The network captains were typically senior level managers from Sam’s Club or Wal-Mart who were considered to be among the company’s top performers. Each one was responsible for leading a cross-functional team of Wal-Mart associates that would be focused on driving sustainability in different parts of the business.

Importantly, Wal-Mart decided to make sustainability a new responsibility for people in their existing positions rather than creating new jobs or building a separate sustainability-related organization. This way, sustainability was less likely
to be considered a fringe initiative led by a disconnected group of individuals in
the home office, but rather an integral part of the way work was performed....
“Business sustainability isn’t something you’re doing in addition to your job. It is a
new way of approaching your job.” (p. 5).

Continuing with what Jib Ellison told us in our interview for this research:

(The new way) requires the senior leadership to see the world anew, and see it as
the right thing to do not only for society and the environment, but also for their
customers and for their shareholders. And once they see it that way, the
innovation engine under the senior leadership is given permission to move. And
there is a lot of similar movement going on in other companies that wasn’t
happening two or three years ago.

There is definitely a mandate to do this at Wal-Mart. Definitely the new CEO (Mike
Duke) is as committed as Lee Scott. As to whether they will take a margin hit to do
this is a very difficult question for a company where the core value proposition is
everyday low prices. They have certainly demonstrated a willingness to pay more
for the raw commodity—the organic cotton they brought to market was more
expensive to purchase than conventional cotton—but what I agree with about
their approach is that if they can’t figure out a way to innovate to get the scale
required to get organic close to price parity with conventional, they are only going
to sell to a relatively small segment of their customer base, therefore the tipping
point won’t be reached.

My understanding is that the American consumer equates “organic” mostly with
higher quality—meaning safer, meaning something about it is better than non-
organic. I don’t know if they know what that really means. But there is a
perception on the part of the consumer that “certified organic” is a better product
in some way, shape or form. For food, they think it means ‘more healthy’ even
though organic processed food may not be any better than non-organic processed
food. For pajamas, does the consumer think that the ones made of organic cotton
are safer or better than conventional cotton pajamas?

The published “Teaching Note for Wal-Mart’s Sustainability Strategy” (Denend
and Plambeck, 2007b) indicates that consumers may be willing to pay more for
environmentally friendly products if they perceive health benefits:

In Wal-Mart’s experience, even if customers indicate on surveys that they are
willing to pay more for environmentally friendly products, that behavior does not
materialize at the check stand. (Some of Wal-Mart’s customers, particularly
mothers, will pay more for environmentally friendly products when they perceive
health benefits, as in the case of the organic cotton baby clothes.) (p. 4).
Continuing with our interview for this research, Jib Ellison said:

I am a big advocate of developing competitive strategies for the race to the top. For example, if all the big retailers start selling organic products, that will create more demand upstream at the farm level. But then there will be those smaller brands—maybe the PrAnas and the Patagonias of the world—who will already be evolving into the next level, which some of the smarter and more nimble mass channel brands will begin to pick up in the “race to the top” in terms of the ultimate impacts on earth.

There is a reasonable question as to whether cotton is the right material for the masses in the first place. If you really look at cotton—conventional or organic—through a sustainability lens, it begs a lot of questions. So why are we still selling organic cotton? Because it is perceived as better than conventional cotton. Very early on at Wal-Mart, the woman who really took the mantle and drove it was the head of apparel, Claire Watts, and her engagement came when we did the cotton tour. She was on a trip to Europe and we took her to Turkey—to see a conventional cotton farm and an organic cotton farm. She saw and smelt the differences, which are stark and significant, and she left that visit somewhat missionary in her orientation saying, “This is unacceptable. If we can make a difference, we should.”

So I think the sustainable driver from a leadership standpoint is rational-emotional. And then, like most things in business, you try to figure out how to make it work. People think it is the other way around, but that’s not how human beings make decisions. And one of our hallmarks, one of the unique differentiators of our firm Blue Sky Sustainability is that we take these field trips, and we take senior execs out, and they go to places they would never normally go, talk to people they would never really talk to, and see things they never normally see—and sometimes it is directly related to their business and sometimes it isn’t—but in all cases it creates a sense that by being a sustainability leader we are up to something. That’s the strength that comes from leadership at a grand scale. It is not about talking sustainability, it is about doing sustainability—and once you do, the pride you will feel and the recognition you will get just by being true to the commitment to innovate is profound. There is nothing like it in this day and age in my opinion.

Claire Watts has since resigned from Wal-Mart, as Market Watch (www.marketwatch.com) reported on July 20, 2007:

Executive vice president of apparel merchandising, Claire Watts, has resigned, a company spokesperson said Friday. Watts, who announced her resignation to the discount retailer yesterday, is leaving “to pursue other career interests.”
Failure with Organic Cotton: Esprit’s eCollection and Nau

Why did some companies fail with organic cotton? Beaver Theodosakis, co-founder of prAna, offered his perspective:

Either the product wasn’t right, or the supply (of organic cotton) wasn’t there or it did not come down from the top. For prAna it was a heavy-handed initiative from the founders. It wasn’t something that some designer thought of or somebody started. This was important to Pam (co-founder) and I, this business walks in harmony with our lives, and this is what PrAna is, period. It wasn’t a marketing campaign.

Strong leadership from the top was also evident at Patagonia and Wal-Mart. Founder Yvon Chouinard mandated the switch to organic cotton at Patagonia. At Wal-Mart, buyer Coral Rose, executive Claire Watts and exemplar Yvon Chouinard influenced the decision, but it was CEO Lee Scott who drove the sustainability initiative and his successor Mike Duke now seems to be doing the same, presumably with the strong support of the board. Duke is said to have told his top managers, “A third of you have bought into this, a third of you are sitting on the fence, and a third of you are waiting for this to go away. Those of you who are waiting for this to go away will be asked to leave; and those of you on the fence better decide soon which side you want to come down on.”

Heidi McCloskey, Director of Communications at Organic Exchange, explained why she thought Esprit’s eCollection failed:

There were only a few vendors for organic cotton in those days and a lot of them are not in business any more. There was very little that was known experientially about growing and processing organic cotton. There were tons of quality issues and there were a lot of things we did wrong. There were a lot of technical glitches that had to be solved and the chemistry wasn’t there to support what we wanted to do. We had restrictions on the colors that we could create, the dyes that we could use, and the machinery that was available.

The reason the eCollection was only a limited success—we did finally make a profit—is that there is only so much green that a person wants to wear, or brown, or natural. And the un-bleached, un-dyed fabric does not look good on everyone. That coupled with some of the quality issues we had—colors fading, so that a garment displayed in a window would have the front exposed to the sunlight a completely different color than the back! I was with them for two years and they closed in 1995.

Chris Van Dyke, former CEO of Nau, spoke to us about why the firm he founded with sustainability in mind went bankrupt:
We described the company as an experiment in a different way to create wealth.
We imposed on ourselves as individuals and also inserted into our bylaws the
requirement that we think about the impact that wealth creation has on the
community and on the environment. So the triple bottom line was memorialized in
our legal structure.

We thought about the product not in isolation but as a total system to minimize
the environmental impact. We had a bias for natural and renewable fibers. We
created a restricted substance list. All the materials for washing and dyeing and
gluing—solvents, washes, adhesives—had to be things that were not on that list.
Since a large part of our line was cotton, we committed to using only organic
cotton. The reason for that was my education at Patagonia around the amount of
pesticides and fertilizers and insecticides that are used in producing traditionally
grown cotton.

That’s how we got started. We certainly believed that our customer wanted
organic cotton, and the prices for organic cotton were coming down. But then Nike
upped their use and Target and Wal-Mart got involved and all of a sudden the
price of organic cotton went up as supply could not keep up with demand—
because it takes three years to convert a traditional cotton farm to certified
organic.

Nau was both a beneficiary and the victim of timing. When we launched the
concept, the dialog around sustainability was just starting to get mo. There was a
large amount of capital, the investment community was looking for new ideas, and
they liked new ideas in this sector. So we were able to raise ridiculous amounts of
capital on a very bold and unproven idea early on. We had pretty aggressive
growth projections. And as we got through two years of building the company and
one year of operating it, three years into it the model was working. We were at or
above what we had projected.

What tripped us up was that, only a year into operating the company, a number of
elements of the business were still considered unproven. The company required
large amounts of capital because this was a retail-based apparel company. Stores
were expensive to operate but retailing was beginning to be viewed unfavorably,
and the capital markets dried up.

Nau closed because the institutional investor that had agreed to fund us through
several funding rounds (they were already our largest investor at about $11M)
pulled out of the deal in the 11th hour. They are a very large east coast hedge fund
that took significant loses from their sub-prime loan involvement. Despite
performance that significantly exceeded our projections, we were unable to
secure new financing on very short timelines and in an investment climate that
was rapidly going to hell.
It was a very unfortunate series of events unrelated to our performance or market viability. Had we been two years earlier, or two years later—who knows—we might have fared differently. We were on a four-year trajectory to profitability and, as I used to say, we had one year in a row of the planned results.

The assets were purchased by Horny Toad of California. They are creating limited product under the Nau name but do not have the focus or commitment to sustainability of the original company. The product is “Nau” in name only.

Is Organic Cotton at Tipping Point?

Beaver Theodosakis, co-founder of prAna, did not believe the industry was at tipping point or would reach it any time soon:

There are retailers such as MEC (Mountain Equipment Company, Canada’s leading supplier of outdoor clothing and equipment) that will not buy cotton products from us unless _all_ of the categories we are offering have an organic line. These are the kinds of customers that are pushing all of us. They are very hard on this. They were mediocre hard two to four years ago, but today it is black and white. If you don’t have organic cotton, we are not buying it. That kind of pressure from the trade is very helpful.

We can push as hard as we want but, for organic cotton to be successful, it the _consumers_ who have to made the decision. It is our job to educate them and inspire them to buy organic. But the number one thing that consumers look for in our products (yoga clothing) is style. Number two I would have to say is fit. Sustainability sneaks in there possibly at number three, but it sometimes gets pushed to number four because of price or color. So it is really about people looking good and feeling good in our product, and the supply chain side of it (sustainability) has been an add on for us and not a headline. There are other companies that use organic as a headline, but they are talking generally to a small audience that is very concerned about that.

I don’t think we are anywhere near the tipping point. Possibly getting close in a couple of tight circles such as yoga and outdoors, but when it comes to mainstream, well, you can look at the percentages there. We are a long way off, and I don’t know if organic cotton will ever be so important for people. What they put in their food and their mouth, yes, organic, but there is not the education, the story telling, out there that is compelling enough for people to go out and search for organic clothes.

For organic cotton to replace conventional, the general mainstream consumer is going to have to connect to these ideas and embrace them as their own. It may
have to come from ways that are different than the ways in which we got the little traction that we did here at prAna, because we are dealing with a more environmentally-conscious consumer. I don’t know where the big trends come from, but what motivated the people to buy organic in our industry will be different than what motivates the masses to truly have a tipping point.

Michael Crooke, CEO of prAna (and this paper’s co-author) added this:

At the LOHAS (Lifestyles of Health and Sustainability) conferences, we found over the years that the reason, quite often, that there were 50 percent new people in attendance is that 50 percent of those who attended the prior year had gone out of business! Those were all the companies that had sustainability as the headline in their value proposition, but they didn’t have the right color, or the right style or the right fit that their customers were looking for. You got to have the best product and then, oh by the way, if it is eco-groovy, then you have a compelling story.

Heidi McCloskey, Director of Communications at Organic Exchange, had this to say:

Today, there is a huge consumer base that understands organic. They may not understand everything about it, but they are savvier than they have ever been. And with so much penetration at mass value chain stores—Target, Wal-Mart—these are companies that reach a mass demographic that has not seen organic until very recently, because it was so high-priced and exclusive. And now its been brought to the masses. So there is a tipping point there. In terms of mass tipping point, I think the world is going to have to change (to sustainability) before we get that, and organic is only one component.

I have used the diffusion of innovation S curve is my presentations to talk about where things are. But with sustainability it feels like we need a zillion S curves before we get to where organic is everywhere in the same volume as cotton.

To sell organic cotton products, I had to get over my idea that people should buy organic for this reason or that reason—because it was good for the planet, because it did provide farmers with a living wage, because it did clean up water and communities et cetera. I had to stop thinking in those terms and figure out where people were in space and meet them there. If they were thinking about women-owned farms, or social benefits, that’s the aspect I would use to educate them about why organic made sense. If it was about environmental issues and pesticides, I met them there. It’s like there are all these different layers of consumers, with different reasons for doing what they are doing. And you have to meet them where they are. If you give them the product they want, the colors and styles they want, and make it available where they want, then you have a chance.
It has taken 10 years to get from 0.1% to 1.0% (world market penetration for organic cotton) and now we are increasing it at a rate that is pretty dramatic, even in a recession.

Chris Van Dyke, former CEO of Nau, offered the following perspective:

The economy is putting pressure on anything that is even slightly more expensive. So it will be difficult to get people to pay 15% more for organic cotton, at least in the short term. At the same time, people are becoming increasingly aware just how environmentally detrimental traditional industrial cotton farming is.

This view is consistent with a recent report in The Economist (“A stress test for good intentions”, May 16, 2009, pp 69-70), which states:

As firms grapple with a brutal economic downturn... cutting back on CSR (corporate social responsibility), or “sustainability” as it is sometimes known, would seem to be a quick and relatively painless way to save money...

So the preliminary results of the CSR stress-test are encouraging. Many firms really do seem to have found ways of making the world better while making money at the same time... Another reason for optimism is that consumer interest in companies’ sustainability credentials remains strong in spite of the recession.

Continuing with what Chris Van Dyke, former CEO of Nau, told us:

For the S curve in the case organic cotton, the educational process itself is a big hurdle. I didn’t really understand the impact of traditionally grown cotton until I got on the bus and went to the cotton fields in southern California on a Patagonia tour and actually saw first-hand the lunar landscape that exists around industrially grown cotton because of the pesticides and herbicides and the chemicals that are used. I mean it is the most horrific thing you have ever seen. That had a real impact on me personally. It is another thing to read about it. It is a really complicated dynamic to comprehend how much these chemicals are used in the production of cotton, its impact on livestock that eats cotton seeds, on the people that work on the ground it is grown in, and so on. Just the education step is not simple; it is a hurdle. It has taken 15 years to get to where we are.

What is happening with organic cotton is part of a larger movement around values-based purchasing decisions for sustainability—not because there is a perceived difference in the functionality of the product but because it is the right thing to do. Organic cotton is physically indistinguishable from traditionally grown cotton at the consumer level. So you can’t talk about product benefits that the consumer can see. They are paying more to buy it only because they believe it is the right thing to do.
I think about four years ago we were at Geoffrey Moore’s chasm in terms of value-based purchasing. But since then we have crossed that chasm—whether it is global warming, or cars that get more mileage or food. In the case of organic cotton, it is riding on the back of a movement, giving it a piggy-back ride if you will across the chasm.

When the economy is bad like it is now, people tighten up. But once the economy improves and they loosen up, they are likely to make smarter purchases and be more thoughtful not only about durability, beauty, and functionality, but also about where the product is made, who made it, and what it is made out of. What is the impact of this product’s creation on the community and on the environment? I think people are starting to think that way. That was a peripheral notion until about five years ago.

Patagonia was way ahead of its time. When Yvon (Chouinard) made the decision to go organic, there was very little business reason for doing that. Their customers and consumers were not thinking about that. Yvon did it because it was the right thing to do. I think he was facing a grand canyon of chasms back then! Today, Wal-Mart is doing it because there is consumer demand for it. I doubt they are going to stick with organic cotton if they see consumer demand slacking. They are not going to do it for sustainability. They’d surprise me if they did. But you can make a list of companies that will continue to use organic cotton simply because they believe in it.

As Michael Crooke, this paper’s co-author and former CEO of Patagonia sees it:

It is clear that the movement to organic cotton would be nowhere near where it is without Patagonia going for it 100% and having the insight to give away their supplier list. Most companies guard this list with vigor. This is another brilliant move by Yvon Chouinard (prior to my arrival at Patagonia).

Jib Ellison of founding partner of Blue Sky Sustainability and a consultant to Wal-Mart, offered his perspective:

The sustainability stuff is just a better view of reality. So whether you are running a big company or a small company, fundamentally the more that you align with these principles the more successful relative to the competition you will be. But until recently very few people in leadership positions understood that, to be blunt, and it is still early days as a practical matter of innovating consistent with this stuff and getting it into the business and not treating it as a public relations exercise.

The tipping point will come—to use the example of cotton as a commodity—when it is grown and processed in a sustainable way to reach a point of price parity, if
not a lower price, than conventional cotton. Until that time, you will not have reached the tipping point.

So the target is to produce enough pull from the consumer and, as we know, the consumer can be heavily influenced by the seller. So I think it does start with the big brands telling the customer this is a better thing and working with the supply chain in such a way that the price can come down. If somehow you can’t get the price to come down, it’s not going to tip. I don’t know of any R&D or any concerted effort at any company to see if we can bring the cost of organic cotton down to the cost of conventional cotton.

Someone could make the argument that it is not the price of cotton that matters so much as the profit margins. That if you could convince the consumer to pay a higher price for organic cotton so that the margins would be the same or better than conventional, then it is going to tip. As a matter of principle that makes a lot of sense but as a practical matter that is highly unlikely, especially in the current economic climate, which is probably not going away any time soon.

I answered the question about organic cotton by not talking about organic cotton because, quite frankly, even organic cotton—if you grow it in the wrong part of the world—is a bad move (because it does consume a lot of water).

Summary: Four Key Steps in the Creation of the Organic Cotton Industry

What the theories to be examined in the second part of this paper need to explain are the four key steps (and the sub-steps) that we observe in the creation of this new industry:

Step 1: After early attempts by others, founder Yvon Chouinard of Patagonia decided to switch to organic cotton.

Step 2: For Patagonia to be able to source, produce and sell organic cotton products, three key sub-steps had to be successfully completed:

   Step 2A: The farmers had to grow organic cotton, and the fibre producers and fabric makers had to produce organic cotton products, in sufficient quantities and at acceptable quality and price levels.

   Step 2B: The Patagonia organization had to source and sell these products.

   Step 2C: The end users—the consumers—had to purchase and use organic cotton products in sufficient quantities and at high enough prices to allow Patagonia to continue to source and sell these products.
Step 3: For organic cotton to move from niche markets to the main market, key individuals at big companies such as Wal-Mart (CEO Lee Scott, executive Claire Watts, buyer Carol Rose) had to decide to source and sell blended organic cotton products.

Step 4: For big players such as Wal-Mart to be able to source and sell blended organic cotton products, three key sub-steps had to be successfully completed:

Step 4A: The farmers had to grow organic cotton, and the fibre producers and fabric makers had to produce organic cotton products, in sufficient quantities and at acceptable quality and price levels demanded by big companies such as Wal-Mart.

Step 4B: The organization at companies such as Wal-Mart had to source and sell blended organic products to the main market.

Step 4C: The end users—the consumers—in the main market had to purchase and use blended organic products in sufficient quantities and at high enough prices to allow big companies such as Wal-Mart to continue to source, produce and sell these products.

PART 2: ANALYTICAL GENERALIZATION

In this section of the paper we explore whether traditional theories and newer perspectives on innovation and change are capable of explaining the creation of the organic cotton industry as described in the research case study presented in Part 1. Specifically, we will examine whether the theories in question can explain the four key steps (and the sub-steps) as summarized above.

We use the phrase capable of explaining because this research case study does not provide the necessary data on all the steps above in the creation of the organic cotton industry. However, we can ask whether each theory has the focus and reach to explain each step in the process if we had all the data. We can also ask if the theory being examined is inconsistent with the case study data that we have been able to collect for this research as presented here. A theory that passes this test may be accepted tentatively as a plausible explanation for one or more of the key steps (and sub-steps) in the process of sustainable industry creation, pending further scrutiny in future research.

Theories of Change Management

The works of both Beer et al. (1990) and Kotter (1995) are prescriptive and applicable to organizational change rather than individual decisions. Although neither of them is a fully articulated theory, in the sense that the reasons why it should work are not completely clear, each proposes a sequence of actions that leaders need to facilitate or take to achieve successful change within an organization. Thus, each seems to be suited to
explaining steps 2B and 4B in the creation of the organic cotton industry. Each theory also seems to be suited to explaining steps 2A and 4A when the farmers, the fiber producers, and the fabric makers are organizations rather than individual entrepreneurs.

**Beer et al. (1990)**

These authors state:

> While in some companies, wave after wave of programs rolled across the landscape with little positive impact, in others, more successful transformations did take place. They usually started at the periphery of the corporation in a few plants and divisions far from corporate headquarters. And they were led by the general managers of those units, not by the CEO or corporate staff people.

This theory seems to apply most directly to a large, multi-unit company such as Wal-Mart. For the case of organic cotton, buyer Carol Rose at Wal-Mart was at the “periphery” so this data point is consistent with the theory. But action item #4 of their theory is inconsistent with our data: “Spread revitalization to all departments without pushing it from the top.” Former CEO Lee Scott was the pusher-in-chief at Wal-Mart and current CEO Mike Duke seems to be doing the same. At two other companies that successfully adopted organic cotton (Patagonia and PrAna), the CEO (the “general manager” in charge of the “unit”), also pushed their unit to adopt organic cotton.

The theory of Beer et al. may explain organization-wide change that begins with grass-roots efforts, but that is not how the companies in this case study adopted organic cotton.

**Kotter (1995)**

The eight sequential action items of his prescriptive theory are:

1. Establishing a sense of urgency
2. Forming a powerful guiding coalition
3. Creating a vision
4. Communicating the vision
5. Empowering others to act on the vision
6. Planning for and creating short-term wins
7. Consolidating improvements and producing still more wins
8. Institutionalizing new approaches

We do not have data on all of the eight action items for all the companies in the case study. For example, we have little or no relevant data on Nike. But the data that we do have do not contradict these eight action items for successful change. It appears that Esprit and Nau failed at action item #6 or later, whereas Patagonia, PrAna and Wal-Mart went through to action item #8.
Theories of the Diffusion of Innovation

Both Moore (1991) and Gladwell (2000) acknowledge their intellectual debt and theoretical lineage to the diffusion of innovation theory of Rogers (1962, 5th edition 2003), so we begin there and consider the two derivative theories later.


Rogers’ theory is widely accepted. He defines diffusion as the process by which (1) an innovation (2) is communicated through certain channels (3) over time (4) among members of a social system (2003, p. 11).

Successful adoption of an innovation—defined as an idea, practice, or object that is perceived as new by an individual or other unit of adoption in a social system—depends on a number of factors, but the two most important are relative advantage and compatibility (2003, p. 17).

Relative advantage is the degree to which an innovation is perceived as better (in terms of economic or social benefits, convenience, satisfaction, or prestige) than the idea it supersedes. The greater the relative advantage of the innovation as perceived by the potential adopter, the more rapid is its rate of adoption.

Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. The adoption of an incompatible innovation often requires the prior adoption of a new value system, which is a relatively slow process. On the other hand, the greater the compatibility, the more rapid is its rate of adoption.

The innovation-decision process is the process through which an individual (or other decision making unit) progresses from a lack of awareness of an innovation up to its adoption. There are five distinct stages in this process (2003, p. 169):

1. Knowledge occurs when an individual or unit is exposed to an innovation’s existence and gains an understanding of how it functions.
2. Persuasion occurs when an individual or unit forms a favorable or unfavorable attitude toward the innovation.
3. Decision takes place when an individual or unit chooses to adopt or reject an innovation.
4. Implementation occurs when an individual or unit puts a new idea into use.
5. Confirmation takes place when an individual seeks reinforcement of an innovation-decision already made, but he or she may reverse this decision if exposed to conflicting messages about the innovation.
The individuals in a social system do not all adopt an innovation at the same time. Rogers classifies them into adopter categories based on when they adopted (2003, Chapter 7):

1. **Innovators**: These are the first individuals in a social system to adopt an innovation. Innovators like new ideas, have the financial resources to absorb possible losses from an unprofitable innovation, and are well connected outside their local peer networks. Communication patterns and friendships among a clique of innovators are common.

2. **Early Adopters**: These are the next group to adopt a new innovation. The adopter category, more than any other, has the highest degree of opinion leadership in the system. Early adopters help trigger a critical mass—the point at which further diffusion becomes self-sustaining—when they adopt an innovation.

3. **Early Majority**: These are the next group to adopt a new innovation, up to just before the average member of the system, and they tend to deliberate a long time before doing so.

4. **Late Majority**: These are the next group to adopt a new innovation, just after the average member of the system. Adoption may be the result of both economic necessity and increasing peer pressure.

5. **Laggards**: These are the last group to adopt a new innovation. The point of reference for them is the past and many are near isolates in the social networks of their system.

These adopter categories are ideal types based on empirical observations. If plotted as a frequency distribution—with the number of individuals adopting a new innovation in a given time period (for example, one month or one year) plotted on the vertical axis and the time periods on the horizontal axis—the adoption of an innovation typically follows a normal bell-shaped curve, with the following percentages for each of the adopter categories (Rogers 2003, p. 281)—innovators (first 2.5%), early adopters (next 13.5%), early majority (next 34%), later majority (next 34%), and laggards (last 16%).

If the cumulative number of adopters in a given time period (for example, one month or one year) is plotted on the vertical axis and the time periods on the horizontal axis, the result is an S-shaped adopter distribution curve. It rises slowly at first, when there are only a few adopters in each time period, and then accelerates to a maximum until about half of the individuals in the system have adopted the innovation. It continues to rise, but more slowly, as fewer and fewer remaining individuals adopt the innovation (Rogers 2003, p. 273).

Rogers describes three different types of innovation-decision processes (2003, p 403):

1. **Optional innovation-decisions**: Choices to adopt or reject an innovation are made by an individual independent of the decisions made by other members of a system.

2. **Collective innovation-decisions**: Choices to adopt or reject an innovation are made by consensus among members of a system.
3. **Authority** innovation-decisions: Choices to adopt or reject an innovation are made by relatively few in a system who possess *power*, high social status, or technical expertise.

*Collective and Authority* innovation-decision processes can occur when the potential adopter is an *organization* rather than an individual. In these situations, stage 4 in the innovation-decision process (implementation) is much more complex, as Rogers (2003, p. 402) points out: “Once an organization has made a decision to adopt, implementation does not always follow directly. Compared to the innovation-decision process for individuals, the innovation process in organizations is much more complex.”

The work of Rogers and his followers has focused mainly on the *individual* as the decision-making unit (*optional* innovation decisions), but his latest book does include a chapter (2003, Chapter 10) on the *organization* as the decision-making unit (*Collective and Authority* innovation decisions), and a five-stage innovation-decision process is described:

1. **Agenda-setting** occurs when a general organizational problem is defined that creates a perceived need for innovation.
2. **Matching** is defined as the stage in the innovation process at which a problem from the organization’s agenda fits with an innovation, and this match is planned and designed.
3. **Redefining/Restructuring** occurs when the innovation is re-invented to fit the organization’s structure and needs more closely.
4. **Clarifying** occurs as the innovation is put into more widespread use in an organization so that the meaning of the new idea gradually becomes clearer to the organization’s members.
5. **Routinizing** occurs when an innovation has become incorporated into the regular activities of the organization and has lost its separate identity.

Rogers recommends that, “We should increase our understanding of motivations for adopting an innovation. Such ‘why’ questions about adoption have seldom been probed effectively by diffusion researchers.” (2003, p. 115). We shall attempt to do so in this paper.


**Step 1**

The *optional* innovation-decision process can explain why Chouinard decided to switch to organic cotton. He acquired *knowledge* about the innovation from Owear’s failed introduction and also from his good friend Doug Thomkins, CEO of Esprit. He was *persuaded* to switch after his field visit that he describes in the case.
Why did Chouinard decide to make the switch? According to the theory, *relative advantage* and *compatibility* are two key drivers. There were in fact economic *disadvantages* in switching to organic cotton, but the social benefits outweighed them in his mind. And the innovation was clearly compatible with the environmental positioning of Patagonia, the firm he founded.

To go deeper into the motivation to adopt a new innovation, as Rogers has recommended researchers do, Chouinard’s desire for Patagonia to be a model of an environmentally-responsible company that other companies would emulate, as well as his personal values (“To know this and not switch to organic cotton would be unconscionable”) were among the key motivators for him.

*Step 2A*

The case study does not provide data on why the farmers decided to grow organic cotton, and why the fibre producers and the fabric makers decided to make organic cotton products for Patagonia, although we do know that Patagonia’s staff worked with the supply chain to source organic cotton products.

*Step 2B*

As founder-owner, Chouinard had the power to decide that Patagonia would switch to organic cotton, so it was an *authority* innovation-decision per Rogers’ theory. The case study does not provide data on Rogers’ five-stage process for organizational innovation.

*Step 2C*

The case study does not include consumer research. According to the theory, *optional* innovation-decision process should explain why some consumers of Patagonia bought organic cotton products, and these consumers would be the *innovators*.

*Step 3*

The other companies in this case study adopted organic cotton because key individuals in these companies (co-founder and co-owner Beaver Theodosakis at prAna; CEO Lee Scott, executive Claire Watts, and buyer Coral Rose at Wal-Mart; CEO Chris Van Dyke at Nau) decided to do so. The case study indicates that the field visits provided *knowledge* and *persuasion* for both Claire Watts and Chris Van Dyke.

*Step 4A*

The case study does not provide data on why the farmers decided to grow organic cotton, and—except for Vivek from Indus-Tex, why the fibre producers and the fabric makers decided to make organic cotton products. The *optional* innovation-decision process seems
to fit the case data on why Vivek began to make organic cotton products for his customers.

*Step 4B*

Key individuals who were persuaded to adopt organic cotton in Step 3 (Beaver Theodosakis, Lee Scott, Chris Van Dyke) also had the power to get their organizations to implement their decision, so the *authority* innovation-decision process explains step 4B per Rogers’ theory. The case study does not provide data on Rogers’ five-stage process of organizational innovation for these companies, so we cannot determine if a missing step in this process contributed to the bankruptcy at Nau.

*Step 4C*

The case study does not include consumer research. According to the theory, *optional* innovation-decision process should explain why some consumers bought organic cotton products. For the smaller, niche companies (prAna Nau) these consumers would be the *innovators*; for the larger companies (Wal-Mart and Nike) these consumers would be either the *innovators* or the *early adopters*.

*Summary for Rogers’ Theory*

The case study does not provide the data required to examine if Rogers’ theory of the diffusion of innovation can explain why suppliers provided organic cotton products (steps 2A and 4A in the process of new industry creation) and why consumers bought them (steps 2C and 4C).

The case study data on why founder Yvon Chouinard of Patagonia decided to switch to organic cotton (step 1) and why key individuals in other companies decided the same later (step 3) is explained by the theory’s *optional* innovation-decision process.

The *authority* innovation-decision process explains how powerful individuals in each company (founder-owner Chouinard at Patagonia, co-founder and co-owner Theodosakis at prAna, CEO Lee Scott at Wal-Mart) influenced the adoption of organic cotton in their companies. However, we do not have the data to corroborate the five-stage innovation model for initiation and implementation of the organic cotton innovation within each of these companies.

*Moore (1991)*

The focus of Moore’s theory is on the end user, so we can examine if the theory is capable of explaining steps 2C and 4C in the process of new industry creation.
Building on Rogers’ theory of the diffusion of innovation, Moore claims that new high-tech products fail to create a mass market because there is a “crack” between the innovators and the early adopters and a “chasm” between the early adopters and the early majority (Moore 1991, p.19).

For example, according to Moore, the early adopters of commercial high-tech products are motivated to get a jump on the competition whereas the early majority wants to buy a productivity improvement tool for existing operations (1991, p. 20). Thus, Moore’s prescriptive theory (unlike Rogers’ descriptive theory) claims that a new high-tech product needs to be re-designed to cross the chasm. However, referring to Moore’s theory explicitly, Rogers argues that there is no evidence to support such a claim (2003, p. 282):

> Past research shows no support for this claim of a “chasm” between certain adopter categories. On the contrary, innovativeness, if measured properly, is a continuous variable and there are no sharp breaks or discontinuities between adjacent adopter categories (although there are important differences between them).

What does the research case study data suggest about whether or not there is a chasm per Moore? Unlike high-tech products that may need to be redesigned for the mass market, organic cotton does not need to be redesigned, because consumers cannot tell the difference between traditional and organic cotton except by looking at the “organic” label.

> For organic cotton products to become a mass market, either the price must come down to equal or less than the price for traditional cotton products, or consumers must be willing to pay its higher price because it is perceived to have worthwhile benefits over traditional cotton—and not simply because it is the right thing to do for the environment, which is what seems to motivate the innovators to adopt. For example, per the research case study, some of Wal-Mart’s consumers, particularly mothers, are willing to pay more for organic cotton baby clothes because of the perceived health benefits (Denend and Plambeck 2007b, p. 4).

Relative to Moore’s theory, it seems more appropriate to think of re-designing people’s knowledge of the benefits of organic cotton products, rather than redesigning the product itself. If there are no real benefits beyond those for the environment, then organic cotton will cross the chasm to become a mass market only if its price is equal to or below the price for traditional cotton products, or if consumers in the main market perceive the environmental benefit as a compelling personal benefit that they are willing to pay extra for.

Gladwell (2000)

Rogers (2003) offers support for Gladwell’s concept of a “tipping point”:
The notion of critical mass originated in physics, where it was defined as the amount of radioactive material necessary to produce a nuclear reaction... Various illustrations of critical mass situations, in which a process becomes self-sustaining after some threshold point has been reached, abound in everyday life (p. 349).

The critical mass is thus a kind of “tipping point” (Gladwell, 2000) or social threshold in the diffusion process. After the critical mass is reached, the norms of the social system encourage further adoption by individual members of the system. As the tipping point is approached, just a few more adopters of the innovation suddenly make a big difference, as the rate of adoption rapidly escalates (p. 352).

The research case study indicates that the concept of tipping point has intuitive appeal, but people have different parts of the value chain in mind—farmers, fibre producers, fabric makers, retailers, and consumers—when they refer to the tipping point for organic cotton. Because the value chain cannot be sustained if consumers do not buy, we will focus on whether organic cotton is at a tipping point in terms of the consumers of these products.

As discussed in the prior section on Moore (1991), organic cotton will become a mass market only if its price is equal to or below the price of traditional cotton products, or if consumers in the main market perceive the environmental benefit as a compelling personal benefit that they are willing to pay extra for. Based on the data we have been able to collect for this research, neither condition seems to have been met at present. All indications are that organic cotton products are 10%-20% more expensive than traditional cotton products at consumer retail prices, and there is no indication—even though big players like Wal-Mart are now selling organic cotton products—that a critical mass of consumers in the main market view the environmental benefits as compelling personal benefits for which they are willing to pay more.

With reference to the innovation-decision process (knowledge, persuasion, decision, implementation, commitment), consumers may be approaching critical mass and tipping point in terms of their knowledge of the benefits of organic cotton, and even in terms of persuasion to buy it, but there is no indication that the adoption process has gone further than that at present.

The analogy to smokers is apt. Until recently in the U.S.—and China, India and other countries have not reached this point as yet—the population had reached a tipping point in terms of knowledge of the health hazards associated with smoking and in terms of persuasion to kick the habit, but they had not actually done so. That is about where organic cotton is at present, and it may not even be that far along in the adoption process.
If the time comes when a tipping point is reached in the consumption of organic cotton products, can the supply chain respond to a sustained surge in worldwide demand? Given the difficulty of growing organic cotton, is there an upper limit on how much of it the world can grow? Our understanding is that once a farm converts to organic cotton, the yields are very close to those for conventional cotton. It is more time-consuming to grow organic cotton and different techniques have to be used to grow it, but the real hurdle is not the yield but the three years it takes to convert the field to certified organic cotton.

Newer perspectives: Sustainable Development and Corporate Redesign

Pearson (2006)

As Pearson states (p. 10):

In 1987, the World Commission on Environment and Development, commonly known as the Bruntland Commission, published what is arguably the most widely referenced definition of what has come to be known simply as sustainability.

*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

The vision for a sustainable future as summarized by Pearson (2006, p. 10) includes five main characteristics:

1. *Runs on clean, renewable energy.* Is powered by natural, perpetual flows of energy—principally, like virtually all life on earth, from the constant energy of the sun.

2. *Uses all resources productively.* Eliminates the concept of waste. Emphasizes services over products.

3. *Supports healthy living systems.* Maintains and restores the health of people and natural systems.

4. *Aligns market incentives with long-term social good.* Aligns structural incentives to encourage the pursuit of economic, social, and environmental ambitions. Makes economic systems honestly account for value created and lost.

5. *Ensures social equity.* Generally embodies a broad definition of democracy.

Items 3 and 4 above are particularly relevant for the case of organic cotton. It is a better alternative than traditional cotton for the health of natural systems, but the market incentives are not aligned with its long-term environmental benefits. As Pearson points out (2006):
Free markets are not perfect. They efficiently establish accurate prices, but they do not account for full costs. The hidden social and environmental costs of economic activity are referred to as “externalized costs.” Government policies and incentive programs that encourage internalization of these costs into the market price of goods and services put the free market to work for the long-term benefit of society. As shown, the cost to industry of internalizing costs is typically lower than the externalized social costs that they resolve. For instance, the cost of pollution-prevention measures are typically much lower than the total costs to society if the measures are not installed (p. 16).

Currently, the perception and reality of cost premiums on sustainability inhibit widespread adoption of sustainable industrial and business practices. There are certainly many cases where the shift to sustainable practices requires substantial initial capital investment, possibly with no guarantee of financial return. The perception – and current reality – of cost premiums must be overcome if sustainable practices are to become mainstream. This happens through the design and realization of new, sustainable solutions that do not incur cost premiums (p. 44).

The current prices of organic cotton products at retail are 10%-20% higher than for conventional cotton. If environmental regulations around the world were to place an appropriate tax on conventional cotton production for the harm it does to the environment, organic cotton would take off. We are not aware of any attempts to design sustainable solutions for organic cotton that do not incur cost premiums.

Pearson (2006) offers a clear vision of a sustainable future and a comprehensive set of ideas and recommendations for achieving it but, as he points out, the underlying “theory of change” is still work in progress:

The broad outlines of a sustainable future have been imagined and described. We know where we want to go. The tricky question, of course, is, “How do we get there?” It is my argument here that this question can only be answered by the kind of systems-conscious, iterative experimentation that is the source of all genuine design innovation. We simply do not know which models for sustainable practice will ultimately prove most effective and successful in the complex fabric of society. Our only way to find out is to make educated guesses and then test the top candidates in the world of practice (p. 41).

Fortunately, support for innovation and experimentation does not preclude a responsible framework of grantee accountability, and the increasing popularity among funders of a “Theory of Change” model of assessment is particularly relevant (p. 42).

As Carol Weiss, a pioneer of this approach to assessment explains (1995, pp. 66-67):
The concept of grounding evaluation in theories of change takes for granted that social programs are based on explicit or implicit theories about how and why the program will work... The evaluation should surface those theories and lay them out in as fine detail as possible, identifying all the assumptions and sub-assumptions built into the program. The evaluators then construct methods for data collection and analysis to track the unfolding of the assumptions. The aim is to examine the extent to which program theories hold. The evaluation should show which of the assumptions underlying the program break down, where they break down, and which of the several theories underlying the program are best supported by the evidence.

This is in fact what we have been doing in this section of the paper as we explore which of the various theories are supported the best by the evidence that we have been able to collect for this research. As Pearson clearly states, what he has presented is not a theory—and not even a particular set of steps to be taken as specified in the work of Beer et al. (1990) and Kotter (1995). As such, it cannot be evaluated as such.

Corporation 20/20 (2008)

The principles of corporate redesign summarized below are the distillation of two years of deliberations among participants in Corporation 20/20, a project to create the vision and chart the course for the future corporation:

The initiative aims to design corporations that seamlessly integrate both social and financial goals. In this process, Corporation 20/20 includes leaders from business, civil society, finance, government, law, and labor.

Distilling the core aims of diverse efforts, Corporation 20/20 views them through a single lens: that of “corporate redesign.” We ask: If we were to design future corporations with social purpose at their core, consistent with the financial needs of business, what would such corporations look like? These principles provide a foundation for meeting this critical 21st century challenge.

The six key principles are:

**Principle 1.** The purpose of the corporation is to harness private interests to serve the public interest.

**Principle 2.** Corporations shall accrue fair returns for shareholders, but not at the expense of the legitimate interests of other stakeholders.

**Principle 3.** Corporations shall operate sustainably, meeting the needs of the present generation without compromising the ability of future generations to meet their needs.
Principle 4. Corporations shall distribute their wealth equitably among those who contribute to the creation of that wealth.

Principle 5. Corporations shall be governed in a manner that is participatory, transparent, ethical, and accountable.

Principle 6. Corporations shall not infringe on the right of natural persons to govern themselves, nor infringe on other universal human rights.

The definition of sustainability is identical to the one used by Pearson (2006), and the two sources seem to share the same philosophy and approach—except that Pearson is focused on sustainability whereas Corporation 20/20 has a broader vision of the key principles for the corporation of tomorrow.

In this case study, Patagonia and Nau are the two companies that come closest to operating according to these principles. Patagonia is privately held and owned by Yvon Chouinard, whose personal values seem to be compatible with these principles. Nau went bankrupt, but it is not clear why. Is it because the investors did not come through with the planned next round of financing (because Principle 2 was yielding insufficient returns to shareholders) and/or because the worsening economy would have led to bankruptcy even if Nau was operating as a traditional business enterprise?

As is true for Pearson (2006), the six principles of “corporate redesign” are a manifesto for change. The corresponding “theory of change” is not available for evaluation.

Boyatzis (2006)

Intentional Change Theory (ICT): The Key Elements

We will draw on a recent Special Issue in the Journal of Management Development to outline the key elements of Intentional Change Theory (ICT), which for many years was called the theory of self-directed learning. As Boyatzis (2006) explains:

In this paper and this entire Special Issue of this journal, we will describe a theory of change that has produced demonstrable results at the individual level, and, we believe, explains change at other levels of human and social organization (p. 607).

At the individual level, ICT describes the essential components and process of desirable, sustainable change in one’s behavior, thoughts, feelings, and perceptions. The “change” may be in a person’s actions, habits or competencies. It may be in their dreams or aspirations. It may be in the way they feel in certain situations or around certain people. It may be a change in how they look at events at work or in life. It is “desired” in that the person wishes it so or would like it to
occur. It is “sustainable” in that it endures—lasts a relatively long time (pp. 608-609).

Desired sustainable changes in an individual’s behavior, thoughts, feelings or perceptions are, on the whole, discontinuous. That is, they appear as emergent or catastrophic changes over time and effort, which is an essential component of complex systems... The same forces result in the changes often being non-linear (p. 609).

For example, in trying to predict performance from individual characteristics, studies have overlooked the tipping point concept... Gladwell (2000) popularized the idea and showed how it often can explain the sudden outbreak of a riot, a run on a bank, surprising stock market drops, and such. This idea, taken from complexity theory, is that up to a certain point, the relationship between a person's abilities and their performance may not appear to exist. But once a specific point is reached, a discontinuity occurs and the effect of a small incremental increase in the person's behavior produces a dramatic increase in effectiveness... This relationship has also been referred to as “the butterfly effect” or trigger point. We believe an analogous dynamic affects the process of change, which is why its documentation may not have appeared in research using continuous statistical methods or without sufficiently frequent measurement of effects to note a point of discontinuity or tipping point (p. 609).

What the studies reviewed in the next section of this paper show is that adults learn what they want to learn... In this way, it appears that most, if not all, sustainable behavioral change is intentional (pp. 609-610).

A “desirable, sustainable change” may also include the desire to maintain a current desirable state, relationship, or habit. But knowing that things can atrophy or drift into a less desired state, the desire to maintain the current state requires investment of energy in this maintenance while external (or internal) forces may naturally provoke a change (p. 609).

A companion article (Van Oosten 2006) in the same Special Issue of JMD provides a summary of the five phases or “discoveries” in ICT, and how they apply at both the individual and organizational levels:

Most of the work using ICT in the last three decades has focused on individual change. This article focuses on the application of ICT in organizational change. A case study of Roadway Express, an organization which has embarked on a journey of cultural transformation since 1999, illustrates a view of ICT at the organizational level (p. 707).

In considering ICT at the individual level, the discoveries represent various stages
that a person cycles through in his/her journey toward desirable, sustainable change.

First discovery. My ideal self - who do I want to be?

Second discovery. My real self - who am I? What are my strengths and gaps?

Third discovery. My learning agenda - how can I build on my strengths while reducing my gaps?

Fourth discovery. Experimentation and practice - experimenting with and practicing new behaviors, thoughts and feelings to the point of mastery.

Fifth discovery. Developing supportive and trusting relationships that make change possible.

These discoveries all apply when considering ICT at the organizational level as well. The difference lies in the outward manifestation of each discovery... For example, in the first discovery - the ideal self - individuals consider their desired future. A result of that exercise might include development of a personal vision. The first discovery in the organizational context is a shared vision. Similarly, in discovery 2 - the real self - the individual reviews strengths and gaps and synthesizes those into a personal balance sheet. At the organizational level, strengths and gaps are those that stand out when compared to the organization’s competitors or marketplace. Performance and climate measures paint the picture of the organization’s real self, in terms of its distinctive core competences, norms and values embedded within the culture, and other symbols of their organizational dispositions (i.e. strengths and weaknesses vis-a-vis others in the same industry and performance).

In the third discovery - the learning agenda - individuals create a learning plan and organizations create strategic plans. The fourth discovery, experimentation and practice, includes action planning for either the individual or the organization, including experiments and innovations in any unit within the organization. Finally, the fifth discovery - resonant relationships - involves the network of trusting people that support an individual’s change. At the organizational level, those relationships get manifested into the web of stakeholders (i.e. employees, managers, customers, suppliers, etc.) who share a common fate in the success of the organization (pp. 708-709).

Case Evidence Concerning Intentional Change Theory (ICT)

Since ICT covers both individual and organizational change, it seems capable of explaining all the steps in the process of new industry creation. Although the research case study does not provide the data to examine this for all the steps, what we do have can be explained by the theory as outlined below.
Steps 1 and 2B

As reported in the case study by Reinhardt et al., in 1991 founder-owner Yvon Chouinard instituted a no-growth policy for Patagonia to limit its harm to the environment (2003, p. 15):

In Patagonia’s Fall 1991 catalog, founder Chouinard published an essay called “Reality Check.” “Everything we make pollutes,” he wrote... Although Chouinard’s no-growth policy was later restated as “slow-growth,” he and his executives continued to search for ways to resolve the tension between their business and their commitment to the environment.

Viewed through the lens of ICT, there was a gap between the ideal self (discovery 1) and the real self (discovery 2) for both Chouinard and for his organization. Ideally, they wanted to do zero harm to the environment. In reality, that was not possible if they were to be in business. Switching to organic cotton provided a way to reduce the gap and the associated tension.

The case study provides data consistent with discoveries 3, 4 and 5 for the Patagonia organization—they did not know how to make organic cotton products, but they developed a plan to do so, experimented and learned how to do it, and created supportive relationships, not only with the supply chain but also with other companies interested in organic cotton, via information exchange and direct contacts including at conferences they held to facilitate the exchange.

It is not clear that discoveries 3, 4 and 5 were needed for Yvon Chouinard because he did not require new learning, experimentation or supportive relationships to create personal change once he mandated that his organization would switch to organic cotton in 18 months or stop making cotton products altogether.

Step 3

Wal-Mart buyer Coral Rose had lived the organic lifestyle for about 15 years (real self). When she saw the opportunity to buy organic cotton products for Wal-Mart (ideal self), she reduced the gap between discovery 2 and discovery 1 by doing so. We do not have data on the other three discoveries for her.

When Claire Watts, Wal-Mart’s EVP of apparel merchandising, visited the cotton farms in Turkey, she was appalled. “This is unacceptable. If we can make a difference, we should.” This suggests that the visit evoked in her mind a gap between the real self (her role in sourcing harmful traditional cotton for Wal-Mart) and her ideal self (the desire to make a difference by sourcing organic cotton products). We do not have data on the other three discoveries for her either.
Step 4B

A gap had developed between Wal-Mart’s real self (its legal and public relations challenges) and its ideal self (good corporate citizen). The research case study provides evidence that Jib Ellison of Blue Sky Sustainability showed the company how to reduce the gap between discoveries 2 and 1 by undertaking system-wide programs to increase the efficiency of the supply chain while doing less harm to the environment.

The published case “Wal-Mart’s Sustainability Strategy” (Denend and Plambeck, 2007a) provides data on the new strategy (discovery 3), on experimentation and practice via the 14 sustainable value networks (discovery 4), and on the use of outside consultants and engagement with stakeholders and NGOs to develop supportive relationships.

Conclusions Regarding the Theories

In steps 1, 2C, 3, and 4C for the process of industry creation, the focus is on individual decisions, and the theories of the diffusion of innovation (Rogers, Moore, Gladwell) seem to be capable of explaining such decisions. In steps 2B and 4B, the focus is on organizational changes, and Kotter’s (1995) theory of change management seems to be capable of explaining such changes. Either one or the other of these two sets of theories seems suited to explaining steps 2A and 4A, depending on whether the farmers, the fiber producers, and the fabric makers are individuals (individual entrepreneurs) or organizations.

The newer perspectives are not able to explain any of these steps in the creation of the organic cotton industry because, even though they offer a compelling vision and recommendations for achieving the vision, the underlying theory of change is not available as yet.

Rogers’ theory of the diffusion of innovation, with the more recent inclusion of organizational innovation decisions (2003), and Intentional Change Theory (ICT) of Boyatzis (2006), both seem to be capable of explaining all the steps involved in the creation of the organic cotton industry. However, we do not have the data required to test this for all the steps (1, 2A, 2B, 2C, 3, 4A, 4B, 4C) in the process of sustainable industry creation.

It would be fruitful to collect the data necessary for a head-to-head comparison of these two theories in future research because they seem to be complementary rather than redundant. A side-by-side comparison of the five key stages in the innovation-decision process (Rogers 2003) and the five key “discoveries” in ICT (Boyatzis 2006) is shown in Table 1.
TABLE 1


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<tbody>
<tr>
<td>Knowledge</td>
<td>My ideal self</td>
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<tr>
<td>Persuasion</td>
<td>My real self</td>
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<tr>
<td>Decision</td>
<td>My learning agenda</td>
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<tr>
<td>Implementation</td>
<td>Experimentation and practice</td>
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<tr>
<td>Commitment</td>
<td>Developing trusting relationships that support change</td>
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The focus of Rogers’ theory is *innovation*—defined as an idea, practice, or object that is perceived as new by the individual or the system. It explains how an individual or a social unit learns about something new (stages 1 and 2) and then adopts it or rejects it (stages 3, 4 and 5).

The focus of Boyatzis’ theory is *intentional change or stasis*, because a “desirable, sustainable change” may also include the desire to maintain a current desirable state, relationship, or habit despite the pressures to change them. The theory explains how an individual or a social unit learns about its ideal and real self (discoveries 1 and 2) and then proceeds to bring the two into alignment (discoveries 3, 4 and 5).

As Rogers has advised, we need to increase our understanding of the motivation for adopting an innovation, i.e., *why* an individual or a social unit adopts something new. Boyatzis’ “discoveries” suggest that the motivation is the desire—conscious or unconscious, individual or collective—to bring the ideal and real self into equilibrium by changing either one or both.
INTERVIEWS CONDUCTED FOR THIS RESEARCH
(IN CHRONOLOGICAL ORDER)

Beaver Theodosakis, Co-founder of PrAna, February 24, 2009.

Vivek @indus-tex.com, Fibre producer in India, February 26, 2009.

Jib Ellison, Founding Partner, Blue Sky Sustainability Consulting, March 2, 2009

Chris Van Dyke, Former CEO of Nau, March 2, 2009.

Rick Ridgeway, Patagonia, April 13, 2009.

Jill Dumain, Patagonia, April 13, 2009.

Yvon Chouinard, Founder and Owner of Patagonia, April 13, 2009.

Heidi McCloskey, Director of Communications, Organic Exchange, April 28, 2009.

REFERENCES


Organic eCollection of Esprit discontinued
Horny Toad bought Nau’s assets out of bankruptcy

Organic collection ongoing

Circle indicates that information on this firm was collected for this research

Location of circle on horizontal axis indicates when firm started selling organic cotton

Figure 1