

# Consumer Desire for Uniqueness in High Tech Products

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## ABSTRACT

*This research examines the role of uniqueness in a high tech product marketing strategy. Primary data is used to uncover information important for high technology firms in regards to consumer personality type and their desire for unique high technology products. By using the information provided, a high technology firm could lower the level of uncertainty associated with high technology products. Our findings are of interest to managers involved in marketing high technology products and academicians engaged in this stream of research.*

**Keywords:** High tech products, product uniqueness, consumer desire for uniqueness, marketing implications

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## INTRODUCTION

In 2009, amidst a global recession, the high technology firm, Apple Co., reported record profits, while other high technology firms such as Microsoft suffered. This trend has continued, some companies like Apple and Samsung, continue to grow while others tend to languish. It is widely theorized that the basis for this selective success is due to superior product uniqueness and continuous innovation in offering unique high tech products, which encourages consumers to remain loyal to the brand. Consider “Think different”, a past marketing campaign of Apple, this defines the firm's marketing and product development attitude that has led to Apple's domination in most product fields it enters (Schneider 2011).

This is merely one illustration of many that demonstrate the importance of uniqueness in the high technology [ht] industries. The goal of this research is to develop an understanding of the uncertainty associated with high tech products (Mohr 2000) using the consumer desire for uniqueness theory propounded by Lynn and Harris (1997). This research examines uncertainty in ht products, with an intent to reduce uncertainties associated with being first to market, while using uniqueness in ht products as a differentiation and a competitive advantage. Reduced uncertainty may bring down costs, allow for R&D costs to be recovered more quickly, and, as a result, reduce new product introduction costs and yield higher satisfaction.

Importance of product uniqueness in a high tech sector can be witnessed in the urgency demonstrated by ht companies attempting to be the first to a market. This urgency may be rooted in the need for firm's products to be viewed as unique. By being the first to introduce an innovative product, never before seen in the market, this need is addressed, and in the process, companies gain market share. It is often difficult for firms who enter late to overcome the established market leader. This causes certain firms to push products out ahead of rivals, even when the product itself is not ready for the market. In the software industry for instance, beta products (products not ready for commercial release) are often rolled out prematurely just because firms can manage the release of these beta products by using fireware to install updates once the customer has already purchased them (McCracken 2011).

In the following sections, we discuss the current status of high technology products in regards to their significance, definition, and the attached uncertainty. We then delve into understanding the element of uniqueness, its importance in innovative product development, the consumers' individual differences in the desire for uniqueness, as well as how ht products benefit from uniqueness. We then develop scales in order to capture the respondent's personality types and desire for uniqueness. The scale is based on prior work of Tian, Bearden, and Hunter's (2001) “Consumer's Needs for Uniqueness.” Their scale was modified to obtain an understanding of respondent's desired level of unique high technology products, as well as ht products that have the ability to facilitate individuals to stand out. Based on findings from our primary data we discuss the significant relationships

between consumer personality types and their desire for unique high technology products.



## VIEW

Technological innovations are driving today's global economy. Innovation has driven almost all economic growth since the Industrial Revolution, and is the key to continual growth in the economy and an increasing standard of living. (West 2011). According to the Global Insight World Industry Service database, which provides production data for the 70 countries that account for more than 97% of global economic activity, the global market for high-tech goods is growing at a faster rate than for other manufactured goods (Investing in America's Future 2006). Firms who compete in an advanced technological arena, as well as countries that look to excel in this area, should spend a considerable amount of time and effort understanding what exactly makes up “high technology.” Successful high-tech firms are associated with innovation. Firms that innovate tend to gain market share, create new product markets, and use resources more productively. High-tech firms are also associated with high value-added production and success in foreign markets, which helps to support increased compensation to the workers they employ (National Science Foundation 1998).

How can one distinguish between low technology and high technology? For one, the Organization for Economic Co-operation and Development (OECD) identifies high-tech industries based on a comparison of industry R&D intensities, a calculation dividing industry R&D expenditures by industry sales. Four research-intensive industries: aerospace, computers and office machinery, electronics and communications equipment, and pharmaceuticals, are classified as high technology (National Science Foundation 1998). If you are attempting to conclude if a good, service, or industry is high technology, there will be noticeable R&D expenditures relative to revenue.

However, these are only the preliminary steps in understanding the essence of high technology. Mohr (2000) argues that high technology industries must have three characteristics: market uncertainty, technology uncertainty, and competitive volatility, and without one of these characteristics a product cannot be considered high technology. Market uncertainty arises from fear and doubt about what needs and/or problems new technology will address, and how well it will meet those needs. Technological uncertainty arises when it is unknown whether the technology, or the company providing it, can deliver on its promise. The product release date may be unspecified, there may be unknown side effects, or it may be unknown how long this product will be functional. Lastly, competitive volatility occurs when there are a number of competitors that have potential to change the competitive landscape through products offered and tools they use to compete.

## Product Uniqueness and Consumer Decision Making

Merriam-Webster defines the word unique as “being without a



like or equal." Firms which produce consumer products must understand the implication of this word and apply it to their product offerings. Uniqueness is found to be an element ever so important in the mind of the consumer. When trying to understand the determinants of new product success, a reoccurring theme has been known to be product innovativeness, or uniqueness (Cooper 1994, 1997). When a product lacks individuality in relation to the rest of the market, it is a key contributor to its failure.

Lynn and Harris (1997) in their seminal work propose three causes of the variability of individual differences in their desire for uniqueness. Their research indicates these three causes to be: the need for uniqueness, social status aspirations and materialism. They point out, first, that people strive for a moderate level of uniqueness by acquiring scarce products. Secondly, social aspirations evolve into a desire for dominance and leadership in social hierarchies, and one way to achieve a higher ranking is through possessions and consumer products. In order to be an effective status symbol, a product must be scarce or unique. Lastly, materialistic people are individuals that are focused on their possessions, and it is thought that this type of people will be more inclined to acquire unique or scarce consumer products. Lynn and Harris (1997) research shows empirical evidence that there is a positive correlation between the above three constructs and a person's actual desire for uniqueness.

In sum, several ways consumers can satisfy their need for product uniqueness include ownership of scarce items, possessing new products before they are adopted by the majority, customizing products, and unique shopping venues (uniqueness enablers). This insight into the desire for uniqueness is crucial for consumer goods manufacturers, as well as marketers. A superior understanding of the source of consumer desire for uniqueness as well as diverse ways to satisfy that desire has profound marketing implications, especially in the ht sector. These two functions must work together to develop a product as well as a product position that is seen as being without a like or equal. If performed successfully, a firm's product offerings should exhibit these elements, and be able to be extremely competitive.

In the creation of communication campaigns for the high tech sector, advertisers understand the importance of uniqueness. Findings show that the majority (51%) of the advertisements in ht touted the originality of the product. It is crucial that marketers relay the innovativeness of the products so they can develop a competitive edge based on their individual characteristics (Gerhard, Brem, Baccarella, and Voight 2011).

Possessing ht elements that are unique compared to the rest of the marketplace will truly benefit the firm. In Kansas City, MO, the International House of Prayer (IHOP) has been establishing a worship center for perpetual (24 hour) prayer. It is the first of its kind and has achieved rapid success, with over \$30 million dollars realized in private donations. One of the contributing factors to this success has been in their use of high technology, in the form of webcams, to broadcast their prayer room via the Internet to countries all over the Globe. By

having a unique offering to viewers, and using ht, this IHOP has achieved so much within the last twelve years (Erik Eckholm 2011).

Another strong example of how ht can reach success in the marketplace, while incorporating elements of uniqueness, is through the introduction of Electronic Cigarettes (e-cigs). The battery-powered mechanism, which can be bought through a number of various channels, delivers an odorless dose of nicotine and flavoring without cigarette tar or additives. It also produces a vapor mist nearly identical in appearance to tobacco smoke. The Chinese manufacturer of the product claims it to be a safe alternative to the deadly tobacco cigarette products that millions smoke every day. The electronic-cigarette industry generates an estimated \$100 million in annual sales versus the tobacco industry's estimated \$614 billion in 2009. In the USA, e-cigs have been I headlines recently. Judging by these numbers, e-cigs are not quite as accepted as tobacco cigarettes yet, which satisfies consumers need for uniqueness. People strive for uniqueness and one way to achieve higher ranking is through possessions and consumer products that are not mainstream; perhaps this is an underlying cause of consumer preference.

Based on our discussion so far, research shows that individuals seem to desire products viewed as unique. Past research demonstrates that people naturally desire uniqueness (Harris and Lynn 1997) and a major contributing factor to new product success is whether the product is indeed viewed as unique (Cooper 1993, 1996). No surprise then, that when high tech firms create advertisements for a product, the majority point out the fact that the product is unique (Gerhard, Brem, Baccarella, and Voight 2011).

What impacts the individual's desired level for uniqueness in high technology products? We built upon Tian, Bearden, and Hunter's (2001) Consumer's Need for Uniqueness (CNFU) scale to address this research question. Scale items were modified specifically for the high technology product context. There are three categories within the CNFU: (1) Creative Choice, (2) Unpopular Choice, and (3) Avoidance of Similarity. We also used another scale originally developed by Harris and Lynn (1997) which measures consumers' desire for unique products (with no focus on high technology). These scales are presented in Table 1.

**Table 1: Scale items**

<b>Creative Choice/Counterconformity</b>
I collect unusual high tech products as a way of telling people I'm different
I have sometimes purchased unusual high tech products or brands as a way of creating a more distinctive personal image
I often look for one-of-a-kind high tech products or brands so that I create a style that is my own
I often try to find a more interesting high tech version of a run-of-the-mill product because I enjoy being original
The high tech products and brands that I like best are the ones that express my individuality
I'm often on the lookout for new high tech products or brands that will add to my personal uniqueness
<b>Unpopular Choice/ Counterconformity</b>
I often buy unconventional high tech products even when its likely to offend others

When it comes to high tech products I buy and the situations in which I use them, I have often broken customs and rules
I have often violated the understanding rules of my social group regarding when high tech products to buy or own
<b>Avoidance of Similarity</b>
When high tech products I like become extremely popular, I lose interest in them
I avoid high tech products that have already been accepted and purchased by the average consumer
High tech products don't seem to hold much value for me when they are purchased regularly by everyone
<b>Desire for Unique Consumer Products</b>
I am very attracted to rare objects
I tend to be a fashion leader rather than a fashion follower
I am more likely to buy a product if it is scarce
I would prefer to have things custom-made rather than have then ready made
I enjoy having things that others do not
I rarely pass up the opportunity to order custom features on the products I buy
I like to try new products and services before others do
I enjoy shopping at stores that carry merchandise that is different and unusual

The Creative Choices are the choices that are different, yet likely to be considered good choices by these others. Unpopular Choices are choices that deviate from group norms and thus risk social disapproval that consumers withstand in order to establish their differentness from others. Avoidance of Similarity concerns the loss of interest in, or discontinued use of, possessions that become commonplace in order to move away from the norm and reestablish one's differentness.

In an attempt to assess what drives an individual's desire for uniqueness, we modified Gosling, Rentfrow, and Swann's (2003) Personality Inventory and reduced it to twenty personality categories as seen below in Table 2. We developed hypotheses for each personality type in relation to whether they have a significant impact on one another or not (neutral); these hypotheses are summarized in Table 2.

Table 2: Summary of Hypothesized Relationships

Personality type	Creative Choice	Unpopular Choice	Avoidance of Similarity
<b>Extraverted</b>	Significant	Significant	Significant
<b>Enthusiastic</b>	Significant	Significant	Significant
<b>Critical</b>	Significant	Significant	Significant
<b>Quarrelsome</b>	Insignificant	Insignificant	Insignificant
<b>Dependable</b>	Neutral	Neutral	Neutral
<b>Self-Disciplined</b>	Significant	Significant	Significant
<b>Anxious</b>	Significant	Significant	Significant
<b>Easily Upset</b>	Neutral	Neutral	Neutral
<b>Open to new Experiences</b>			
<b>Complex</b>	Significant	Significant	Significant
<b>Reserved</b>	Insignificant	Insignificant	Insignificant
<b>Quiet</b>	Insignificant	Insignificant	Insignificant
<b>Sympathetic</b>	Neutral	Neutral	Neutral
<b>Warm</b>	Neutral	Neutral	Neutral
<b>Disorganized</b>	Insignificant	Insignificant	Insignificant
<b>Careless</b>	Insignificant	Insignificant	Insignificant
<b>Calm</b>	Neutral	Neutral	Neutral
<b>Emotionally Stable</b>	Significant	Significant	Significant
<b>Conventional</b>	Insignificant	Insignificant	Insignificant
<b>Uncreative</b>	Significant	Significant	Significant



## ETHODOLOGY

According to Gosling, Rentfrow, and Swann's (2003) Personality Inventory and the modified version of Tian, Bearden and Hunter's (2001) Consumer's Need for Uniqueness, we asked

participants to rank their responses to the proposed statement using a modified Likert-type scale with 1 being "strongly disagree" and 5 being "strongly agree". There was an additional section of questions in regards to participant's demographic information. The survey rotated through several rounds of pretesting in order to check for human errors, redundancy, and unnecessary questioning. We worked diligently to make sure the survey was manageable and efficient for the individual taking time to complete it. We distributed this survey on-line nationally via email and social media. A sample size of 196 usable responses was achieved for the purpose of this study.

## Findings

As seen below in Table 3, there were more females (55%) than males (45%) who participated in the survey. As one might have expected from a survey based out of a higher educational institution, there was a large percent of 18-22 year olds (52%), with the next age group being 46 or older, making up 34 % of the respondents. To coincide with the above data, 52% of respondents were currently in college, and 13% had undergraduate degrees. Household income level was much more equally distributed than age and education levels. Participants responded most to having a household income of \$201,000 or more (21%), followed by \$101,000- 150,000 (20%), then \$151,000- 200,000 (18%).

Table 3: Sample Profile (n=196)

Gender	n	%
Male	90	45.9
Female	106	54.1%
<b>Age</b>	<b>n</b>	<b>%</b>
18-22 years old	107	54.6%
23-29 years old	15	7.7%
30-45 years old	27	13.8%
46 years and over	47	24%
<b>Level of Education</b>	<b>n</b>	<b>%</b>
Some high school/ High School Graduate	5	2.6%
Currently in College	103	52.6%
Undergraduate degree	26	13.3%
Currently in graduate school	5	2.6%
Postgraduate degree	57	29.1%
<b>Household Income</b>	<b>n</b>	<b>%</b>
\$30,000 or less	20	10.2%
\$31,000-\$75,000	27	13.8%
\$76,000-\$100,000	31	15.8%
\$101,000-\$150,000	40	20.4%
\$151,000-\$200,000	36	18.4%
\$201,000 or more	42	21.4%

We examined the relationship between the twenty personality types listed above along with the Creative Choice scale (Chronbach Alpha .933), Unpopular Choice scale (Chronbach Alpha .802), and Avoidance of Similarity scale (Chronbach Alpha 0.883). All scales exhibited acceptable validity and reliability scores. The creative choice scale (Alpha 0.933) showed excellent psychometric properties and validity, the

other two scales with Alpha values in 0.80 range have good psychometric properties that indicate scale validity. All scales have been used in the past and exhibit excellent face and content validity, our validity results were in line with prior research in the area. We then devoted our attention to any relationship we found to be significant at the 0.10 level of significance. A complete list of our findings along with the corresponding F values can be found below under Table 4.

**Table 4: Personalities and Interaction with the Four Scales (F values reported)**

Personalities	DUCP	Creative Choice	Unpopular Choice	Avoidance of Similarity
Extraverted	2.2*	1.6	1.6	7.1***
Enthusiastic	3.1**	1.7	.6	2.2*
Critical	2.5**	1.6	2.5**	1.03
Quarrelsome	1.4	1.4	3.0**	1.8
Dependable	.07	.92	.1*	1.3
Self-Disciplined	1.1	1.9	2.8**	1.0
Anxious	4.1***	1.1	1.4	1.0
Easily Upset	1.9	.9	.1	1.9
Open to new experiences	7.8***	2.1	2.3*	.04
Complex	1.8	1.7	.5	1.5
Reserved	.4	.9	1.2	.3
Quiet	2.6**	2.1*	4.3***	2.7**
Sympathetic	2.3*	.51	.62	.6**
Warm	2.6**	1.8	.8	.6
Disorganized	1.2	.9	.9	.3
Careless	1.3	1.0	.2	.4
Calm	1.8	1.1	1.3	.9
Emotionally Stable	1.3	1.3	1.1	2.1*
Conventional	2.2*	1.0	2.7**	2.2*
Uncreative	1.9	.8	.6	1.8

\* = < .10; \*\* = < .05; \*\*\* = < .01

We found individuals who characterize themselves as extraverted, enthusiastic, critical, anxious, open to new experiences, quiet, sympathetic, warm, and conventional have a desire for unique consumer products. Quiet individuals demonstrated a significant relationship to the Creative Choice scale. In regards to Unpopular Choice, our findings were that individuals who are classified as critical, quarrelsome, dependable, self-disciplined, open to new experiences, quiet, and conventional all had a significant relationship with the scale. Lastly, the Avoidance of Similarity scale demonstrated a significant relationship with people who are extraverted, enthusiastic, sympathetic, quiet, emotionally stable, and conventional.

Further, we examined whether there were significant relationships between various demographics and desire for products. ANOVA results indicated ethnicity of the respondent has an impact on the desire for unique high technology products ( $F=5.745$  p: 0.001). Our results indicated there was also a significant relationship between gender and age and the desire for unique high technology products as found in the modified scale developed by Tian, Bearden and Hunter's (2001) Consumer's Need for Uniqueness.

Lastly, we used regression analysis and found several significant relationships. We used the composite desire for uniqueness scale for ht products as a dependent variable and the other three composite scales as independent variables. The data indicated an excellent fit between Creative Choice scale and the desire for ht uniqueness ( $F=.97.815$ ;  $p=0.001$ ,  $R^2=.335$ ). Next, we found Unpopular Choice had a significant

impact on the desire for ht uniqueness ( $F=.38.27$ ;  $p=.0001$ ,  $R^2=.399$ ). Lastly, we found Avoidance of Similarity had a significant impact on the desire for ht uniqueness ( $F=.22.46$ ;  $p=.0001$ ,  $R^2=.428$ ).



## CONCLUSIONS

The findings in this research provide high technology marketers with a deeper insight into their target consumers. Results indicate the importance that uniqueness has on customer's desire for high technology products. Firms are now aware that by producing and marketing unique products, they can reach a higher level of market success, such as the success Apple Co. experienced. Through this research, ht firms can observe who reacts best to their unique high technology products. For instance, we now are aware that ethnicity, age, and gender have a significant impact on desire for unique high technology products. We found that Asians and African Americans, although the sample size is small, tend to favor unique high technology products over Caucasians and Hispanics. We also found that individuals under the age of 29 favor unique high technology products over those who are 30 years old and over. Lastly, we have found that males tend to favour unique high technology products on average more than females.

Marketing managers can use this information to create marketing strategies which can target these potential customers more effectively. Furthermore, our results indicate that various personalities react in a significantly positive or significantly negative way to unique high technology products. A marketer can use this information, along with the other significant relationships between personality types and desire for uniqueness, to create a campaign which attracts these various personality types. A strong example of this can be seen in our new understanding of how "reserved" individuals reacting poorly to unique high technology products while "extroverted" individuals react strongly. As a maker of a high technology product, one can create an advertising campaign based on this information, and then choose the appropriate targeted communication content and media strategy.

There is often a lot of uncertainty for a firm when entering the market for high technology products. The three characteristics of high technology products as outlined by Mohr (2000): market uncertainty, technology uncertainty, and competitive volatility can be a deterrent for anyone entering the market with a product viewed as high technology. Our findings are applicable to the market uncertainty aspect of Mohr's (2000) research. This aspect focuses on the uncertainty that arises from potential customers not believing the product can meet their needs. However, through the use of the information provided through our research, a high technology firm could lower the level of uncertainty associated with high technology products.

We must alert the reader to certain inherent limitations of our research: the sample was dominated by younger participants, mainly because of the researcher profiles and topic that



attracted younger respondents; there was an inadequate representation of the older generations. As is often the case with self-reported psychographic research, people in general have a tendency to believe that they do not have negative personality types (such as being easily upset and quarrelsome). People also tend to over-report personality traits which are positive (such as enthusiastic). This might have impacted our results. We feel that if the sample size was larger there would possibly be much stronger significant relationships.

We believe that more extensive future studies could add further insights. Future research on this topic can go a number of ways in improving upon our findings. We did not examine why certain personality types react certain ways to unique

high technology products. Being able to answer “why” will develop a superior understanding of consumer preference. We suggest that future research build upon our findings in terms of a larger and wider sample that accounts for cultures, subcultures, and national differences. While USA has traditionally been the bedrock of advances in R&D of high-tech products, nations such as Japan and Taiwan (and other Asian markets) have traditionally been the frontrunners in accepting and adapting innovations in high-tech, as evidenced by the early product launches in these markets that are used as indicators of commercial success in the rest of the global marketplace. We suggest that studies that extend understanding of our constructs in diverse markets present a fruitful opportunity for further research.

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