

## Lust for Danger- Text

Klaus Manhart

***A ruinous night at the roulette table. A bungee jump off a mountain. Such actions defy human reason, but we still seek the thrill***

- 1 The two empty cars sit idling, side by side. Jim and Buzz each get into their vehicles, close the doors and push their gas pedals to the floor, racing headlong toward the edge of a cliff. The canyon below comes into view--they should each leap from their driver's seats before their cars vault into the abyss, but the first one to bail out loses. At the last possible moment Jim throws open his door and dives out onto the ground. Buzz waits too long and plummets over the edge to certain death.
- 2 The scene described above symbolizes the way a turbulent generation of young people in the 1950s went to extremes to find their own identities. Teenagers pushed risky behavior to the limit, senselessly putting their lives on the line. Yet this desire to court danger crosses every era, age group and social class. Reckless driving, for example, is common on highways around the world. Mountain climbers cling to sheer rock faces, skiers rush down steep slopes, married people have secret affairs, and partygoers drink to excess.
- 3 When danger calls, it seems, many are ready to respond. Today men and women of all ages are suddenly playing computer gambling games in homes, schools, offices and casinos, risking real money just for the thrill of it. In the late 1990s, responsible parents, who for years had safely put their savings into family bank accounts, risked everything on grossly speculative high-tech stocks in hopes of cashing in on the dot-com boom. Thrill-seeking behavior is ubiquitous in other cultures, too: in Africa and South America, members of various tribes risk all their worldly possessions on games of chance.

***Ancestors who roamed took greater risks than cave dwellers  
but passed down stronger survival skills.***

- 4 Why do we have such a passion for dangerous situations, even when the outcome can literally be fatal? Because these activities give the brain a chemical high, and we like how it feels. And why would the brain reward us for risky behavior? Because taking chances helped early humans find food and mates, and those successful risk-takers passed on their genes to us. Still, we certainly have the reasoning power to deny ourselves dangerous pleasures, yet so frequently we do not, and today psychologists are trying to determine why we can't seem to avoid the trouble we get ourselves into.

## **Adventurers Rule**

- 5 The quest to explain why we lust for danger has ebbed and flowed over the years. But as our understanding has progressed, it has become evident that humans are driven to take risks--and the more that they do, the more likely they are to thrive. According to the accepted theory most recently advanced by biologist Jay Phelan of the University of California at Los Angeles and economist Terry Burnham, formerly of Harvard Business School, our penchant stems from prehistoric times, when the world was populated by two basic types of humans: those who nested and those who ventured forth. Nesters pretty much stayed in their caves, subsisting on plants and small animals in their immediate vicinity, remaining ever cautious. Adventurers roamed the land; although their daring exploits put them at greater risk of getting killed, they also discovered the tastier fruits and the more productive hunting grounds. At the same time, they gathered practical survival experience, becoming better equipped to withstand the rigors of nature. These more capable doers were frequently able to live long enough to have numerous children, successfully passing on their genes until their type eventually came to dominate our species.
- 6 Our passion for taking risks is therefore a biological legacy, and a preference for such behavior continues to pervade society today. Of course, rational thinking in the 21st century can readily overcome such biological preference. Yet it is difficult to deny that the brain interprets risky behavior as a sign of strength. For example, psychologists have shown that young women, at gut level, are more attracted to "dangerous" men than to "safe" men. One reason is that despite obvious complications, the "outlaw" type may be more likely to come out on top should conflict with others arise. The "tough guy" may appear to offer women greater protection for physical survival.
- 7 This association is particularly evident in cultures that have changed little throughout the ages. In the 1960s and 1970s, American cultural anthropologist Napoleon A. Chagnon of the University of California at Santa Barbara conducted a study of the Yanomamo Indians, who live along the Brazilian-Venezuelan border. He discovered that certain males lived with many more women than the rest, and every one of these men was known as a fearless warrior. These men also fathered far more offspring than their more timid tribesmen. Chagnon concluded that aggression-oriented genes win the upper hand in human reproduction.

## **Addicted to Dopamine**

- 8 In the past decade, studies of brain chemicals and genes have supported Chagnon's supposition. Humans are driven to seek thrills, and for some, the more they find the more they want. Such drives vary greatly among individuals. For certain people, even the minimum bet during a friendly game of poker can rattle the nerves. Others relish parachuting out of airplanes. The difference may be explained by each person's **dopamine\*** system--how much of this neurotransmitter people have and how readily it can transmit messages between nerve cells. For the biggest thrill seekers, dopamine brings about a very real state of intoxication; the more that is released by a thrill, the greater their rush.

*People with an excessive need to be energized by dopamine  
accept danger as part of life's game.*

\*dopamine = chemical found in the brain

- 9 Psychologists refer to such behavior as "sensation seeking," and a mix of physical and psychological factors are at work. People with a greater need to be energized by dopamine generally accept the physical, social or financial risks of sensation seeking as part of the game. But what causes the strong dopamine response? Psychologist Marvin Zuckerman of the University of Delaware maintains that the culprit is monoamine oxidase B. This enzyme is one of the chemicals that breaks down dopamine. The less monoamine oxidase B a person has, the more the dopamine flows, and the more likely he or she is to be a thrill seeker.
- 10 Genes may play a part, too. In 1996 scientists discovered a gene called the D4 dopamine receptor, quickly dubbed the novelty-seeking gene. It provides the code for a specific dopamine receptor and was thought to be responsible for minimizing the anxiety that normally accompanies risky behavior. People who have this receptor tend to go to excessive measures to get a rush. For these folks, commonplace situations that other people would find stimulating produce little more than boredom. Other experts are not convinced about this gene's power, however. Some 18 studies done since 1996 have examined the link between its occurrence and thrill-seeking behavior, but only half of them have found any quantifiable connection.

### **Invincible Me**

- 11 To some psychologists, a person's readiness to give in to the temptation to seek thrills is an extreme case of a more general human trait--the tendency to estimate risk poorly and to overinflate anticipated performance. For example, according to psychological surveys, most people believe themselves to be healthier than the average person. They also feel that they are more astute in judging profit-making schemes. Experts refer to this phenomenon as the "optimistic bias." It occurs when danger is recognized but the level of risk is not accurately perceived. This skewed view would explain why a heavy smoker tends to estimate his cancer risk as less severe than a moderate smoker of the same age and gender does.
- 12 Underestimation also suppresses our fearful emotions. We simply assume that we will not be affected or at least that we are less susceptible to harm than others might be. As a result, we also become less willing to take precautions. Studies by Matthew Kreuter of the Saint Louis University School of Public Health and Victor J. Strecher of the University of Michigan at Ann Arbor indicate that people often indulge in unhealthy or risky behavior despite being fully aware of the danger involved. Examples abound, such as the five skiers near Park City, Utah, this past winter who ignored warning signs and jumped fences to ski down unchecked terrain--to their deaths.
- 13 Humans in general are not very good at weighing risks. We are "probability blind." If a roulette wheel stops on red five times in a row, many onlookers will hold the false belief that on the next spin, chances are higher than normal that the wheel will hit black. Of course, every spin has the same mathematical probability of coming up red or black: 50-50. Yet casino gamblers by the thousands succumb to such fallacious thinking.
- 14 In much the same way, people are scared of plane crashes far more than car accidents, because an airline disaster is more dramatic, even though a much higher percentage of travelers die while riding on the road. We also roundly fear spectacular causes of death, such as murder, being struck by lightning or being

bitten by a poisonous snake, even though the chance that we would fall prey to such an exotic demise is very small. Casino owners, lottery ticket sellers and insurance agents shamelessly exploit our miscalculations to sell that "winning" ticket or that "safety" policy against odds that are highly unlikely.

- 15 How is it, then, that the human brain, which can comprehend much more complex mathematical relationships, can make such fundamental errors in judgment? Evolution may provide an answer here as well. As the brain developed over millennia, events such as attacks from enemies and bites from snakes posed real dangers that became strongly imprinted in our neural circuitry. Our fears are therefore not completely unfounded, yet they do not really pertain to the modern world.
- 16 Still, the brain cannot easily adjust to such abstract probabilities. How many people who buy a lottery ticket are really considering the fact that they must rule out 14 million incorrect numerical combinations in choosing the exact winner? Instead we apply bogus, though seemingly time-tested, rules of thumb. As psychologists Daniel Kahneman of Princeton University and the late Amos Tversky of Stanford discovered in their research on statistical fallacies, we tend to believe that the more memorable an event, the more often it is likely to occur.

### **Fake It Instead**

- 17 In dangerous situations, bad math, underestimation of risk and overestimation of our own strengths conspire to make us lose more than win, yet we willingly wade into them anyway. Mathematicians who study gambling have calculated that in the long term, players always come out on the losing end. Statistically, for example, regular roulette players win about 95 percent of their investment--that is, they lose 5 percent of their money. Sociologists often say that playing such games is the equivalent of paying a "stupidity tax." In risky situations, our insufficient sense of probability enters into a dangerous liaison with dopamine intoxication. In assessing our chances, we cannot trust our intuitive, primitive brains to make decisions. Rather we must rely on an unemotional analysis of the actual factors that are involved.

*Video games and horror films allow us to live  
on the edge without going over it.*

- 18 Of course, that is easier said than done. For many people, reason simply takes a vacation when the chance for thrills arises. Deliberate precautions may therefore be the best way to counter temptation. One proven strategy recommended by psychologists is self-policing--setting limits before an activity begins. Gamblers, who run the risk of losing their shirts, can bring a predetermined amount of money with them into a casino or tell friends to escort them out, forcibly if needed, at a certain time.
- 19 A second strategy is to substitute artificial danger for real danger. We do not have to abstain completely from the dopamine high or risk our health or wealth. Modern society offers many safe thrill-seeking situations: the exhilarating ride of a roller coaster, the fright of a horror film, the fast-paced intensity of a video game. These experiences drive up our dopamine levels and make us feel keenly alive. Our brains do not differentiate whether the rush is real or manufactured. We can live on the edge without risking going over it.

**THE END!**

**Lust for Danger- Questions**

**Questions based on the title, sentence under the title and paragraphs 1 – 4**

1. According to the sentence, what is paradoxical about our behavior with respect to dangerous activities?

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(6 points)

2. According to the writer risky behavior is limited to American teenagers.

True

False

Explain your answer by referring to the text.

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(5 points)

3. What was the long-term benefit of risk-taking for the development of the human species?

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(5 points)

**Questions based on paragraphs 5 – 10**

4a. What are the differences between nesters and adventurers?

Nesters \_\_\_\_\_

\_\_\_\_\_

Adventurers \_\_\_\_\_

\_\_\_\_\_

(6 points)

b. According to Phelan and Burnham, which of the following were more successful?

Nesters

Adventurers

Check ✓ one.

(2 points)

Explain your choice

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(4 points)

5.a. According to psychological research, what is the **determining factor** that makes women seem to prefer "dangerous" men?

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(6 points)

b. Does Chagnon's research confirm or refute Phelan and Burnham's theory?

Confirm

Refute

Support your answer by referring to the text.

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(6 points)

6. What do scientists think is the effect of the D4 dopamine receptor on anxiety?

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(5 points)

7.a In what way does the effect of the D4 dopamine receptor on anxiety explain the fact that some people are bored in everyday situations?

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(5 points)

b. Is this explanation widely accepted?

Yes

No

**Explain your answer in your own words**

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(4 points)

**Questions based on paragraphs 11 – 19**

8. Explain how the example of the skiers near Park City in Utah (end paragraph 12) illustrates "underestimation"?

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(4 points)

9. Give an example from the text of probability blindness

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(2 points)

10. A young, inexperienced swimmer trying to swim a long distance is an example of:

Circle the correct answer

- a. underestimation
- b. probability blindness
- c. none of the above

(4 points)

11.a. According to the text which of the following activities frightens people most?

**(You need to infer your answer)**

Check ✓ the correct box

- a. Driving home from work
- b. Sky diving (צניחה חופשית)

(4 points)

b. According to the text which of the examples above is actually more dangerous?

Explain your answer according to the text.

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(4 points)



12.a What fundamental error in judgment does the brain make about dangers in the world today?

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(6 points)

b. How do Kahneman and Tversky explain this reasoning?

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(4 points)

13. Explain why sociologists think that gamblers pay a "stupidity tax"?

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(6 points)

14.a. What can people do to help themselves avoid risky behavior? List **two** methods.

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(4 points)

b. How might these alternative behaviors prevent us from undertaking really risky behavior?

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(4 points)

15. Which of the following quotations from the text best represents the **main idea** of the text?

**Check ✓ one.**

- a.  "according to psychological surveys, most people believe themselves to be healthier than the average person"
- b.  "people with an excessive need to be energized by dopamine accept danger as part of life's game"
- c.  "ancestors who roamed took greater risks than cave dwellers but passed down stronger survival skills"
- d.  "[Dangerous] actions defy human reason, but we still seek the thrill"

(4 points)

**GOOD LUCK!**

## Lust for Danger: Answer Key

### Questions based on the blurb and paragraphs 1 – 4

1. According to the blurb, what is paradoxical about our behavior with respect to dangerous activities?

***Blurb: Such actions defy human reason, but we still seek the thrill***

(6 points)

2. According to the writer risky behavior is limited to American teenagers.

**False**

Explain your answer by referring to the text.

**Para. 2: .....this desire to court danger crosses every era, age group and social class.**

**OR Something from para 3: Today men and women of all ages are suddenly playing computer gambling games in homes, schools, offices and casinos, risking real money just for the thrill of it. In the late 1990s, responsible parents, who for years had safely put their savings into family bank accounts, risked everything on grossly speculative high-tech stocks in hopes of cashing in on the dot-com boom.**

**OR Thrill-seeking behavior is ubiquitous in other cultures, too: in Africa and South America, members of various tribes risk all their worldly possessions on games of chance.**  
(5 points)

3. What was the long-term benefit of risk-taking for the development of the human species?

**Para 4: ....taking chances helped early humans find food and mates,(up to here 3 points) and those successful risk-takers passed on their genes to us** (need this for full credit)

**OR** Passed down stronger survival skills.

(5 points)

### Questions based on paragraphs 5 – 10

4a. What are the characteristics of nesters and adventurers?

**Nesters: Para 5: stayed in their caves, subsisting on plants and small animals in their immediate vicinity, remaining ever cautious**

**Adventurers: roamed the land; they also discovered the tastier fruits and the more productive hunting grounds.** (6 points)

b. According to Phelan and Burnham, which of the following were more successful?

**Adventurers**

(2 points)

Explain your choice

**IF THEY CHOSE NESTERS IN b. THEN NOTHING HERE**

**Para 5: These more capable doers were frequently able to live long enough to have numerous children, successfully passing on their genes until their type eventually came to dominate our species. (4 points)**

5.a. According to psychological research, what is the determining factor that makes women seem to prefer "dangerous" men?

Use **YOUR OWN** words.

**Para 6: Anything that explains that:**

**"the "outlaw" type may be more likely to come out on top should conflict with others arise. The "tough guy" may appear to offer women greater protection for physical survival." (6 points)**

b. Does Chagnon's research confirm or refute Phelan and Burnham's theory?

Confirm  Refute

Support your answer by referring to the text.

**Para 7: He discovered that certain males lived with many more women than the rest, and every one of these men was known as a fearless warrior. These men also fathered far more offspring than their more timid tribesmen.**

**Chagnon concluded that aggression-oriented genes win the upper hand in human reproduction. This sentence is sufficient (6 points)**

6.a. What do scientists think is the effect of the D4 dopamine receptor on anxiety?

**Para 10: .....thought to be responsible for minimizing the anxiety that normally accompanies risky behavior. (5 points)**

b. In what way does the effect of the D4 dopamine receptor on anxiety explain the fact that some people are bored in everyday situations?

**Para 10: People who have this receptor tend to go to excessive measures to get a rush. (UP TO HERE 3 POINTS) For these folks, commonplace situations that other people would find stimulating produce little more than boredom. (5 points)**

c. Is this explanation widely accepted?

Yes  No  (2 points)

**Questions based on paragraphs 11 – 19**

7.a Explain how the example of the skiers near Park City in Utah (end paragraph 12) illustrate "underestimation"?

**Par 11: People often indulge in unhealthy or risky behavior despite being fully aware of the danger involved.**

or

**Para. 11: when danger is recognized but the level of risk is not accurately perceived.**

**Par. 12: We simply assume that we will not be affected or at least that we are less susceptible to harm than others might be. (partial credit) (4 points)**

b. Give an example from the text of probability blindness

**Para. 13: If a roulette wheel stops on red five times in a row, many onlookers will hold the false belief that on the next spin, chances are higher than normal that the wheel will hit black. OR Para. 14: people are scared of plane crashes far more than car accidents, because an airline disaster is more dramatic, even though a much higher percentage of travelers die while riding on the road. OR**

**Para. 14: We also roundly fear spectacular causes of death, such as murder, being struck by lightning or being bitten by a poisonous snake, even though the chance that we would fall prey to such an exotic demise is very small.**

(4 points)

c. Match each of the **THREE** examples below to its correct explanation from the list: There is only **ONE** correct explanation for each example.

<b>Example</b>	<b>Explanation</b>
A. A young, inexperienced swimmer trying to swim a long distance.	<b>C</b> optimistic bias
B Buying a lottery ticket from a shop where you bought a winning ticket before.	<b>A</b> underestimation

(6 points)

8.a. According to the text which of the following activities frightens people most?

Check ✓ the correct box

- a. Driving home from work
- b. Sky diving (צניחה חופשית)  (2 points)

b. According to the text which of the examples above is actually more dangerous?

Explain your answer according to the text. **IF PART a IS WRONG NOTHING HERE STUDENTS SHOULD SPECIFY a or b – but if there explanation says it give full**

**points. Para. 14: people are scared of plane crashes far more than car accidents, because an airline disaster is more dramatic, even though a much higher percentage of travellers die while riding on the road**

**STUDENTS SHOULD EXPLAIN THAT DRAMATIC EVENTS ARE MORE FRIGHTENING BUT USUALLY LESS DANGEROUS IN TERMS OF DEATHS (STATISTICALLY)** (4 points)

9.a What fundamental error in judgment does the brain make about dangers in the world?

**Para. 14: We also roundly fear spectacular causes of death, such as murder, being struck by lightning or being bitten by a poisonous snake, even though the chance that we would fall prey to such an exotic demise is very small.**

**OR Par. 15: As the brain developed over millennia, events such as attacks from enemies and bites from snakes posed real dangers that became strongly imprinted in our neural circuitry. (NOTHING IF IT FINISHES HERE) Our fears are therefore not completely unfounded, yet they do not really pertain to the modern world.**

**STUDENTS MUST WRITE THAT OUR PERCEPTION OF DANGER DOES NOT MATCH THE STATISTICAL CHANCES OF ENCOUNTERING THESE DANGERS.**

(6 points)

b. How do Kahneman and Tversky explain this reasoning?

**We tend to believe that the more memorable an event is the more likely it is to occur.** (4 points)

10. Explain why sociologists think that gamblers pay a "stupidity tax"?

**Para. 17: Mathematicians who study gambling have calculated that in the long term, players always come out on the losing end. OR Statistically, for example, regular roulette players win about 95 percent of their investment--that is, they lose 5 percent of their money** (6 points)

11.a. What 2 things can people do to help themselves avoid risky behavior?

**Para. 18:**

**1. self-policing--setting limits before an activity begins**

**Para. 19:**

**2. to substitute artificial danger for real danger**

(4 points)

b. b. What physiological explanation is given for why substituting alternative behaviors is effective?

**Para. 19:**

**These experiences drive up our dopamine levels and make us feel keenly alive. Our brains do not differentiate whether the rush is real or manufactured.**

(4 points)

12. Which of the following quotations from the text best represents the **main idea** of the text?

"[Dangerous] actions defy human reason, but we still seek the thrill"

(4 points)