Impaired Driving Prevention – Maryland Highway Safety Office - 2010

On average, 189 persons die annually in Maryland due to alcohol-related crashes, and more than 5,000 persons are injured; 2008 figures for alcohol-related traffic fatalities involving drivers with a .08+ in Maryland include 152 deaths. Approximately 26 percent of the total traffic fatalities were alcohol-related. In 2008, 24,000 arrests were made for DUI in Maryland, averaging 66 arrests per day. According to NHTSA, "impaired driving can be defined as a reduction in the performance of critical driving tasks due to the effects of alcohol or other drugs. It is a serious crime that kills every 30 minutes nationally, and in Maryland, it equates to 13 deaths a month or a death every 38 hours. The number of alcohol and drug-related crashes decreased from 8,610 in 2007 to 8,137 in 2008, having exceeded our Strategic Highway Safety Plan objective of decreasing impaired driving crashes to 8,173 by 2010. The MHSO's efforts to combat impaired driving have primarily been focused on enforcement and public information campaigns. The MISO continues to partner with local and state law enforcement agencies, AAA Mid-Atlantic, the Washington Regional Alcohol Program, DUI/Drug Courts, Mothers Against Drunk Driving, and this past year, with the Governor's Executive Committee to study and develop recommendations for the development of a comprehensive impaired driver case management program titled Maryland Alcohol Safety Action Program.

The MHSO's Impaired Driving Program is highly supported and influenced by the statewide Impaired Driving Coalition made up of more than 280 members, consisting of representatives from federal, state and county agencies, non-profits and not-for profit organizations, law enforcement agencies; hospitals, institutions for higher education, advocate agencies; employers, and related agencies with an involvement in highway safety. The coalition is dedicated to education and awareness through enforcement initiatives, local and statewide media campaigns ranging from paid and earned media activities, and countless prevention efforts. The legislative subcommittee of the Impaired Driving Coalition, in coordination with Neil Pedersen, Governor's Highway Safety Representative and State Highway Administrator in tracking and ensuring that the recommendations submitted by the Maryland Task Force to Combat Driving Under the Influence of Drugs and Alcohol submitted in 2008. To date, a number of recommendations have been completed and several others are under development, including the study of a DUI Tracking System via the Traffic Records Coordinating Committee and a pending grant to conduct an inventory of statewide data systems that would have a stake in the development of such a system.

In early December 2009 Governor O'Malley signed an Executive Order that convened an Executive Committee to study the feasibility of the MASAP, develop and propose a business model for this comprehensive program. The Executive Committee studied issues related to a comprehensive monitoring, rehabilitation, education, and enforcement program to help address the needs of a first time, repeat, or high risk offender, as well as increase accountability of and services provided to impaired drivers and help reduce recidivism. The Special Multi-Agency Initiative was titled Maryland Alcohol Safety Action Program (MASAP). This recommendation is modeled after the successful VASAP model operating in Virginia since 1972. The Committee was active from June 2010 - December 2010 and a report submitted for consideration. The Committee was chaired by State Highway Administrator and Governor's Representative for Highway Safety, Mr. Neil J. Pedersen and Co-Chaired by Mr. Patrick McGee, Director of the Division of Parole and Probation, Department of Public Safety and Correctional Services. The lead staff person was Liza Aguila-Lemaster, MHSO's Chief, Program Advisory Section and Impaired Driving Prevention Coordinator.

The Impaired Driving Campaign continues to combat impaired driving from a multi-faceted, data driven approach. It includes a high visibility enforcement program coupled with an intense marketing effort. The campaign is specifically designed for high-risk areas. The Checkpoint Strikeforce Campaign specifically targeted its enforcement efforts along rural roadways to support the NHTSA and Maryland crash data that show rural roadways to be at greater risk for impaired driving. A significant effort was put toward this ad campaign and educational outreach in Maryland. The creative ads were written and produced to connect with the target audience of 21-35 year old males. The ads utilized the findings of the campaign's opinion poll to create messages that hit home with the target audience. The 2009 media impressions for CPSF include: Radio: 19,360,000, TV: 2,531,011, Outdoor: 998,455. In addition to this launch, more than 8,304 ads will run on a total 20 broadcast stations which represent 5 cable TV stations, 14 radio stations and one major network in Maryland between August and January 2, 2011.

The TipsyTaxi and SoberRide campaigns continue to provide free cab rides to would be drunk drivers. Several law enforcement DUI trainings were held. A special marketing and education campaign was used to target Latino based establishments and Maryland continues to operate DUI Courts. Over 12,000 Christmas tree tags that asked Marylanders to designate a sober driver were distributed statewide, as well as over 8,300 wine bags and vinyl window clings for local liquor stores to increase awareness of designating a sober driver during the holidays.
In addition, the state launched for its third year its annual marquee program, asking local partners and the SHA to ask drivers to "Report Drunk Drivers. Call 911". Local law enforcement agencies, local business partners, law enforcement and other stakeholders graciously participate in this month long initiative in addition to increase enforcement.

Finally, the Impaired Driving Campaign successfully launched its social marketing campaign, DUI Is For Losers. The project was intended for local efforts to be heightened during the Winter and Spring months while Checkpoint StrikeForce is operating under sustained enforcement activities. This project unveiled a website as part of the Choose Safety for Life site and highlights the consequences of impaired driving, alternative to driving impaired, shares actual stories of families who have lost a loved one to an impaired driving crash and provides links to useful resources. The program is targeted to the hard to reach 21 - 35 year old male. It implemented extremely creative media outreach strategies including never used before projection advertising on the side of the Baltimore jail off of the highly traveled interstate 83. Likewise a unique approach was taken to place vinyl, life-sized images of impaired men and women with catchy phrases on their shirts on the floors inside the bathrooms of 7 Baltimore City bars and 3 Anne Arundel County bars. The bathroom advertising was extremely well received, it created incredible viral marketing and was even picked up by a Japanese newspaper featuring the program and its unique marketing strategy. This strategy along with billboards along the same corridors as the local bars garnered a conservative 50,000 impressions.

**Objective**

- Decrease the total number impaired driving related crashes from 8,556 in 2004 to 8,173 in 2010*
- Decrease the total number of impaired driving related fatalities from 215 in 2004 to 206 in 2010*
- Decrease the total number impaired driving related injuries from 4,572 in 2004 to 3,089 in 2010*
2010 FACT SHEET

Maryland Drunk Driving Facts

• In 2008, Maryland’s 152 alcohol-related traffic fatalities represented 26 percent of all traffic fatalities.

• In 2009, over 25,000 impaired driving arrests were made in Maryland, averaging 70 arrests per day.

• Nationally, a driver involved in a fatal crash who had a BAC of .08 or higher was 8 times more likely to have a prior conviction for driving impaired than a driver involved in a fatal crash who had consumed no alcohol.

• Nationally, the highest percentage of drivers in fatal crashes who had BACs of .08 or higher was for drivers 21 to 24 years old (34%), followed by drivers 25-34 (31%), and 35-44 (25%).

Checkpoint Strikeforce

• Checkpoint Strikeforce is a research-based, zero-tolerance initiative designed to catch and arrest drunk drivers through the implementation of sobriety checkpoints, and to educate the public about the dangers and consequences of drunk driving.

• Males between the ages of 21 and 35 are the primary target audience. This demographic group is typically harder to reach with public awareness campaigns and statistically at the highest risk for drunk driving.

Public Opinion

• A July 2009 public opinion survey of 21-35-year-old males in Maryland, Virginia and District of Columbia found:
  - The biggest fear amongst this group of local male drivers as a result of driving while intoxicated is killing or injuring someone else (75-percent), more than arrest (two-percent) or their own death (ten-percent).
  - Nearly three-quarters (72-percent) of these local drivers perceive drunk driving as one of the most serious dangers faced on area roadways.
  - More than nine-out-of-ten (93-percent) of this group of local male drivers support the use of sobriety checkpoints.
  - Nearly two-out-of-five (19-percent) of these local drivers said that they would (or have) changed their behavior knowing that sobriety checkpoints were being held in their area.
A recent Maryland Highway Safety Office public opinion poll strictly of Maryland residents indicated:

- Nearly three out-of-four respondents believe a motor vehicle can be safely operated when you consume 1 or fewer alcohol drinks.
- More than three-fourths of respondents agree there should be extra penalties for drivers who are arrested with very high blood alcohol concentration, those with BAC .15 or above.

**Law Enforcement Component**

- During the 2009 FFY Maryland sobriety checkpoints and saturation patrols resulted in 65,352 vehicle contacts, raising public awareness of increased enforcement efforts.
- Law enforcement agencies statewide are stepping up the number of sobriety checkpoint and saturation patrols every week during August throughout Maryland, Virginia and the District of Columbia. This increased focus on impaired driving enforcement will continue through the end of 2010.
- Sobriety checkpoints are a highly targeted way to fight drunk driving because they are strategically timed when and located where drunk driving is more likely to occur, making them amongst the most effective tools to stop drunk driving.
- Aggressively deployed sobriety checkpoints can result in a 20 percent reduction in alcohol-related crashes.
- Maryland will be conducting 19 sobriety checkpoints during the month of August and over 100 other saturation patrols as part of the enforcement blitz from August 20 – September 6, 2010 during NHTSA’s 2010 Impaired Driving National Enforcement Crackdown.

**Media and Public Awareness Component**

- Complementing the deployment of sobriety checkpoints and saturation patrols is a highly visible, resonant advertising and public awareness effort outlining the consequences of impaired driving.
- A significant effort has been put toward an ad campaign and educational outreach in Maryland. The creative ads were written and produced to connect with the target audience of 21-35 year old males. The ads utilize the findings of the campaign’s opinion poll to create messages that hit home with the target audience.
- More than 7,000 ads will run on a total 15 broadcast stations, cable systems and radio stations in Maryland between August and December 2010.
- Participation in local events, including select Ravens Game Day tailgating festivities at Lot O.
Getting There: Decisions before drinking lead to NFL players' DUIs

Die is cast long before violators leave the bar

By Michael Dresser, The Baltimore Sun

4:06 PM EST, January 2, 2011

Once again, drunken driving is all over the sports pages. Within the past two weeks, Ravens rookie Sergio Kindle and Redskins lineman Joe Joseph have been charged with driving under the influence.

Kindle apologized to the Ravens organization for making a "mistake." Joseph put out a statement saying he was "very remorseful" about the events that led to his arrest in Loudoun County, Va.

Here's as good a place as any for the caveat that they are legally presumed innocent until proven guilty. Nevertheless, their public statements hardly sound like protestations of innocence.

It's possible, maybe even likely, that either or both of these men has a problem with alcohol. That's a matter best left to them and their physicians.

It doesn't really matter because alcohol isn't the culprit here. The circumstances suggest that both men — like many drunken driving offenders — made bad decisions before they were drunk. And in their cases, like those of other affluent drunken drivers, the legal offense appears to have been complicated by the moral aggravating factor of cheapness.

Kindle, for instance, is reported to have driven to downtown Washington to visit bars with a group of friends before being arrested in Howard County at 4 a.m. on the way to BWI-Marshall Airport. Bad choice. With the signing bonus he received, Kindle was clearly in an economic position to hire a limo. Then he and his friends could have kept drinking to their hearts' content without putting anyone else on the road in danger.

Instead of choosing a course that would have cost him hundreds of dollars, he chose one that could cost him thousands — and maybe an NFL career.

There's an image evoked by public service ads of crazy-drunk people stumbling out of a bar or a party with their judgment in such tatters that they refuse to fork over their keys and insist on driving home.

That certainly happens — often — but that's not where the problem begins. It often starts when not-yet-...
drunk people choose to drive to a place where they know it's entirely likely they will drink to excess. That they will try to drive home in spite of their condition becomes a foregone conclusion.

Let's say it's our friend Bud's habit to drive to the Dew Drop Inn every Friday evening after work and drink with his friends until near closing time. Chances are he knows from experience that he's going to consume enough to put himself over the legal limit.

From the public's point of view, the problem isn't Bud's alcohol consumption. As long as driving isn't involved, that's pretty much between him and his liver. The problem is the original decision to drive to the tavern instead of staying home or arranging alternate transportation before going out.

So what drives that decision? In many cases, the answer is money. Bud thinks a cab would cost too much, and has managed to drive drunkenly home many a night without getting caught. So doing it again seems like a good gamble until those blue and red lights start flashing.

It's also a control issue. Bud doesn't want to give up the sense of independence he gets from having his own wheels nearby — even if he's barely able to keep that car on the road by closing time. Or maybe it's image. If Bud's buddies hear he's taking precautions against drunken driving, they'll think he's a wuss because they're all getting into their cars.

What isn't driving the decision is alcohol. Bud doesn't need to go to the Dew Drop to get a buzz on. Alcohol can be obtained and consumed more inexpensively and safely by stopping at a liquor store and heading home to drink. The attraction of the tavern or the party is social, not chemical.

So why do we so often look to alcohol treatment as the prescription for curing drunken driving? Sometimes the problem isn't so much addiction as contempt for the law.

Believe it or not, there are many people with alcohol dependency for whom drunken driving isn't a problem. They manage to order their lives so that driving and drinking don't overlap. Some decide to live in neighborhoods where a drink is always within staggering distance. Others keep their consumption under tight control until they're safely at home for the night. Others might be the taxi company's best customers. They might be damaging themselves, but they don't imperil others.

Yes, there are alcoholics who try but have great difficulty keeping their addiction separate from their driving. Some of them may sincerely want to keep driving more than they want to keep drinking. For these folks, court-ordered alcohol treatment in a highly structured environment is likely the best solution.

But there are also folks who simply aren't willing or able to quit drinking no matter how many times you force them into treatment. Or whose repeat offenses put the public at so much risk, they don't deserve further patience.

Instead of alcohol treatment or forced participation in 12-step programs, these violators may need driving-avoidance counselors who will help them rearrange their work and family lives so they can get rid of their cars and devote themselves to their first love: booze.

In extreme cases, the state may need to use coercive measures to get people to choose one or the other. Such measures could include ignition interlock, vehicle confiscation or permanent revocation of driving privileges. Prison, while less than ideal as a long-term solution, can at least keep chronic drunken drivers off the road as long as they're locked up.
Whether you're dealing with NFL players or mild-mannered accountants, the key is to affect the decision-making process early. It isn't enough to tell friends not to drive when they're already drunk. Friends need to help friends make sober choices that avoid the possibility of driving drunk.

michael.dresser@baltsun.com

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Jeremy Gunderson

To: Liza Aguila-Lamaster; 'Karen Branch'; 'Cash, Caroline'
Subject: DUI Facts and Resources

Caroline and Liza, below are some facts and resources that will be going on our www.duisforlosers.com website. I just did a precursory search this morning to find these, and I am sure that I have missed several really compelling stats/facts and resources. Our target population is young males, so the stats need to resonate well with them, and they typically will not click on government websites or sites that are "telling them what to do". I would welcome any additions and edits you may have......especially with the Facts.

DUI Facts:

Each year there are approximately 1.5 million arrests for impaired driving in the United States. In 2008 there were over 24,000 arrests for impaired driving in Maryland. Approximately two-thirds of those arrested for impaired driving each year do not have previous impaired driving convictions.

153 people died in Maryland in 2008 due to an alcohol-related crash.

Of those 153 fatalities, 66% involved a driver with a BAC higher than .15, or over twice the legal limit. Motor vehicle crashes are the leading cause of unintentional death in the United States.

Alcohol is a factor in 6% of all traffic crashes, and over 40% of all fatal crashes. Traffic death rates are three times greater at night than during the day, according to the National Safety Council.

Resources:

Baltimore's Tipsy?Taxi! Program
www.freecabrides.org
Free cab rides home from Baltimore bars on particular holidays. Go online to find out which holidays this free (up to $50) service operates. Did you know a $50 cab ride will get you from Federal Hill to Carroll County?

DC's SoberRide Program
http://www.wrap.org/soberride/
Free cab rides home from DC area bars on particular holidays. Go online to find out which holidays this free (up to $50) service operates.

#TAXI
http://www.poundtaxi.com/
Any cab. Anytime. Put this one on speed dial.

Safe Rides Solutions
www.saferidesolutions.net
This service will bring an off-duty law enforcement officer to you, drive you and your car and your friends home. This is a paid service. Available only in Baltimore and Prince George's County. Inquire online.

01/22/2010
Drivers Incorporated
http://driversincorporated.com
One-way driver services for you and your car. Available only in Montgomery County

National Directory of Designated Driver Services
http://www.drinkinganddriving.org/tools/services.html
Tell your friends in other states about this useful site.

The B4UDrink Educator Virtual Bar
http://www.b4udrink.org/bac/program/

How a DUI Conviction Affects Your Insurance
http://www.insure.com/car-insurance/drunken-driving-penalties.html Description of the affects that a DUI may have on an insured's auto policy, from insure.com, an online consumer insurance information service.

A Breakdown of the Costs of a DUI

The ABC's of BAC: A Guide to Understanding Blood Alcohol Concentration and Alcohol Impairment
http://www.stopimpaireddriving.org/ABCsBACWeb/page2.htm

What to Do When You Are Involved in a Car Crash
http://www.nsc.org/news_resources/Resources/Documents/What_to_Do_When_You_Are_Involved_in_a_Car_Crash.htm

What are the Standardized Field Sobriety Tests and How Will They Be Administered When I Get Pulled Over?

The Cost of a DUI versus The Cost of a Hotel Room
http://www.drinkinganddriving.org/lessons/get-a-room.html

Get The Keys: How You Can Intervene

Portable Breathalyzers Reviewed
http://www.drinkinganddriving.org/Articles/personal-tech.html
Only buy Fuel Cell or Silicon Oxide Semiconductor sensor models. Avoid novelty models which can give false readings. A decent portable model will cost you $100-$150. Compare that to a $15,000 cost of a DUI.
Risk Analysis and Risk As Feelings
An Examination of Affect, Reason, Risk, and Rationality
Paul Slovic
Decision Research
1221 Oak Grove
Eugene, OR 97401
pslovic@dsruiang.eugon.edu
Debt Conference
May 3, 2002

Overview
1. What is risk and why do we fight about it?
2. Risk as analysis and risk as feeling
3. The dance of affect and reason
4. Empirical studies of the affect heuristic
5. System failures and the need for monitoring
6. Moral intuition and gamelike neglect
7. Conclusions

- Polarized views, controversy, and overt conflict have become pervasive within risk assessment and risk management. Frustrated scientists and industrialists navigate the public for behaviors they judge to be based on irrationality or ignorance. Members of the public feel similarly antagonistic toward industry and government.
- This dissatisfaction can be traced, in part, to a failure to appreciate the complex and nuanced nature of the concept "risk."

Risk Analysis

Risk Assessment Identification Qualification Characterization

Risk Management Decision making Assessment Implementation Communication Evaluation

The complexity of risk
What Is Risk?

1. Risk as hazards
   • "Which risks should we rank?"
2. Risk as probability
   • "What is the risk of getting AIDS from an infected needle?"
3. Risk as consequences
   • "What is the risk of letting your parking meter expire?"
   Answer: "Getting a ticket."
4. Risk as potential adversity
   • "How great is the risk of riding a motorcycle?"
   • There is some unspecified blend of probability and payoff.

The language of risk is problematic.

If we define a risk as a hazard or as a danger, then risks are certainly real and objective. There are things that can harm us.

If we define risk as a measure of potential harm from a hazard, then risk is subjective, value laden, and open to dispute.

I will next use this second definition.

Here are three risky courses of actions A, B, and C. Which has the most risk? Which has least risk?

<table>
<thead>
<tr>
<th>Action</th>
<th>Probability</th>
<th>Loss</th>
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<tbody>
<tr>
<td>A</td>
<td>.5 chance</td>
<td>$10</td>
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<tr>
<td>B</td>
<td>.1 chance</td>
<td>$500</td>
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<tr>
<td>C</td>
<td>.01 chance</td>
<td>$1000</td>
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</table>

Expected loss ($P \times C$)

A. .5 chance to lose $100 $-50
B. .1 chance to lose $500 $50
C. .01 chance to lose $1000 $10

What Is Risk?

- Risk does not exist "out there," independent of our minds and cultures, waiting to be measured.

- Human beings have invented the concept risk to help them understand and cope with dangers and uncertainties of life.

- There is no such thing as "real risk" or "objective risk." The nuclear engineer's probabilistic risk estimate for a nuclear accident or the toxicologist's quantitative estimate of a carcinogenic risk are both based on theoretical models, whose structure is subjective and impressionistic, and whose inputs are dependent on judgment.

Selecting Endpoints for Analysis

- An adequate risk characterization must include all impacts of concern to those at risk and of concern to those responsible for decision making. Selection of endpoints is another act of judgment.

One way in which subjectivity permeates risk assessment is its dependence on judgments in every stage of the process, from the initial structuring of a risk problem to deciding which endpoints or consequences to include in the analysis, identifying and estimating exposures, choosing dose-response relationships, and so on.
Selecting Endpoints for Analysis

- Risk characterization typically focuses on only a few select endpoints such as cancer or birth defects. However, an adequate characterization may also need to include effects on the immune system and related systems (physiologically), neurological effects, behavioral effects, and effects on reproduction and development. Psychological impacts (e.g., anxiety, depression) and ecological impacts may also be important.

Choosing a Measure of Risk

- Is coal mining getting safer? It depends on which measure you choose.

Choosing a Risk Measure

- Some ways of expressing mortality risk:
  - Deaths per million people in the population
  - Deaths per million people within x sales of the source of exposure
  - Deaths per unit of concentration
  - Deaths per facility
  - Deaths per ton of air toxin selected
  - Deaths per ton of air toxics absorbed by people
  - Deaths per ton of chemical produced
  - Deaths per million dollars of product produced
  - Loss of life expectancy associated with exposure to the hazard

The Multidimensional Nature of Risk

- The public has a broad conception of risk, qualitative and complex, that incorporates considerations such as uncertainty, dread, catastrophic potential, controllability, equity, risk to future generations, and so forth, into the risk equation.

The Multidimensional Nature of Risk

- There are legitimate, value-laden issues underlying these multiple dimensions of risk, and these dimensions need to be considered in risk policy decisions. For example, is risk from cancer (a dread disease) worse than risk from auto accidents (not dreaded)? Is a risk imposed on a child more serious than a known risk accepted voluntarily by an adult? Are the deaths of 50 passengers in separate automobile accidents equivalent to the deaths of 50 passengers in one airplane crash?
Defining risk is an exercise of power. Whoever
controls the definition of risk controls the rational
solution to the problem at hand. If you define risk
one way, then one option will rise to the top as
the most cost-effective or the safest or the best. If
you define it another way, perhaps incorporating
qualitative characteristics and other contextual
factors, you will likely get a different ordering of
your action solutions.

The limitations of risk science, the importance
and difficulty of maintaining trust, and the
subjective and contextual nature of the risk game
point to the need for a new approach—one that
focuses upon introducing more public
participation into both risk assessment and risk
decision making in order to make the decision
process more democratic, improve the relevance
and quality of technical analysis, and increase
the legitimacy and public acceptance of the
resulting decisions.

Risk As Analysis vs. Risk as Feelings

Analytic/ Deliberative

Experiential/ Affective

Neuron

Reward and Decision

Neural Economics

- Survival is about economic evaluation
- The brain is an economic evaluation engine
- The core of neural economics is the recognition that rapid, ongoing economic
evaluation is a central function carried out by the nervous systems of whole
creatures
- Without some kind of internal currency in the nervous system, a creature would be
unable to assess the relative value of events in its environment, including food,
water, and other things
- The dopamine system is well designed to handle the kinds of decisions that an early
human would have encountered, however it is grossly inadequate in many situations
that have arisen in modern society—e.g. drug abuse

At the psychological level
this “common currency”
may be affect:
A valenced quality (e.g., goodness
or badness) associated
with a stimulus
Four functions of affect

1. Acts as a common currency
2. Acts as information
3. Acts as a spotlight
4. Acts as a motivator of action

(Peeters, 2006)

There are 1,198,500,000 people alive now in China. To get a feel for what this means, simply take yourself — in all your singularity, importance, complexity, and love — and multiply by 1,198,500,000.

See? Nothing to it.

-Annie Dillard, For the Time Being (1999)

Some Elements of the “Affect Story”

1. Evaluating gambles
2. Destination preferences (vacations, jobs, retirement)
3. Risk perception/communication (dangerousness)
4. Marketing/Advertising/promotion
   - names, labels, images, packaging
5. Protective measures/insurance/life saving
6. Stigmatization of places, products, technologies
7. Investment judgments and decisions
8. Punitive damage awards
9. Youth smoking
The strategies of human reason probably did not develop . . . without the guiding force of the mechanisms of biological regulation, of which emotion and feeling are notable expressions. Moreover, even after reasoning strategies become established . . . their effective deployment probably depends . . . on a continued ability to experience feelings.

Antonio Damasio; 1994, p.xii

The emotions are of quite extraordinary importance in the total economy of living organisms and do not deserve being put into opposition with “intelligence.” The emotions are, it seems, themselves a high order of intelligence.

O. Hobart Mowrer
Learning Theory and Behavior
(1960, p. 308)

Images ⇒ Affect ⇒ Behavior

- Psycholinguistics (Dowgell – 1952)
  - Communicative meaning of words determined by affective (positive/negative) orientation
- Learning Theory (Mowrer – 1950)
  - Behavior is guided and sustained by conditioned orientational responses to images
- Neurology (Damasio – 1994)
  - Emotion is mediated by the limbic system and its connections with the cerebral cortex
  - Affective brain networks are essential for emotional processing
- Social Psychology (Epstein – 1994)
  - Interaction effects on emotions and behavior

Seymour Epstein; 1994, p. 710

There is no dearth of evidence in everyday life that people apprehend reality in two fundamentally different ways, one variously labeled intuitive, automatic, natural, non-verbal, narrative, and experiential, and the other analytical, deliberative, verbal, and rational.

Seymour Epstein; 1994, p. 710

Two Modes of Thinking:
Comparison of Experiential and Analytic Systems

Experiential System | Analytic System
--- | ---
Affective/pleasure-irrelevant | Logical reason-oriented (what is important)
Connection by association | Connection by logical assessment
Behavior mediated by learning | Behavior mediated by conscious appraisal of world
Encodes mentally concrete images, emotions, and intuitions | Encodes mentally abstract symbolic, verbal, and analytical
More rapid processing oriented toward immediate action | Slower processing oriented toward delayed decision
Self-evidently valid "coexisting is believing" | Requires verification via logic and evidence

System 1 is like intuitive judgment

Intuitive judgment is like perception

"From its earliest days, the research that Tversky and I conducted was guided by the idea that intuitive judgements occupy a position—perhaps corresponding to evolutionary history—between the automatic operations of perception and the deliberate operations of reasoning."

-Daniel Kahneman (2003)

- Perception is sophisticated and remarkably accurate.
- But perception is subject to powerful systematic biases.
The squares marked A and B are the same shade of gray.

- Intuitive judgment, like perception, is sophisticated, accurate, and sometimes very biased.

System 1 and System 2 are both highly sophisticated Systems, essential to rational behavior.

System 1 is similar to perception. It is the form of risk analysis that enabled human beings to survive the long course of evolution.

Yet System 1, in some circumstances, is subject to powerful systematic biases.

Street Calculus
By Gary Tversky

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Fig. 4. Example of counterbalancing liking judgment.
SomeTechnicians, 1980, & Krieglstein.
Heart and Mind in Conflict
Shiv & Fedorikhin (1999)

Room 1
memory a number
2 digits or 7 digits

choose a snack
chocolates over regular and plain water
fruit salad

Room 2
Report the number that was memorized
2-digit group 7-digit group
41% chose cake 63% chose cake

Consumption Behavior

Many factors can interfere with
System 2, causing judgment and
decision making to be determined
more by System 1

Valuation by Expression

Personal and impersonal moral dilemmas
Studied by Greene et al. 2001.

Rohbridge Dilemma
System 2

Tetley Dilemma
System 1

Reliance on Feelings Increases With:
- Intemperance
- Cognitive Load
- Category of task & instruction
- Amount of information
- Memory demand
- Stress
- Time pressure
- Perceived pain
- Perceived health
- Risk厌恶
- Afford rich outcomes & images evaluable information display
The Bases of Cognitive Conflict and Control in Moral Judgment

Affect Conveys Meaning on Information

Evaluability

"To say that an attribute is hard to evaluate... means that people do not know whether a given value on the attribute is good or bad..."

Chirs Hsee (University of Chicago)

Attributes of Two Dictionaries in Hsee's Study

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<th>Number of entries</th>
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<tr>
<td>Dictionary A</td>
<td>1993</td>
<td>10,000</td>
<td>No, it's like new</td>
</tr>
<tr>
<td>Dictionary B</td>
<td>1993</td>
<td>20,000</td>
<td>Yes, the cover is long otherwise it's like new</td>
</tr>
</tbody>
</table>

Source: Adapted from Hsee (1998)

Exhibit 1. Drawings in Study 2

<table>
<thead>
<tr>
<th>Evaluation Mode</th>
<th>Vendor L's</th>
<th>Vendor L's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate evaluation</td>
<td>51.66</td>
<td>52.26</td>
</tr>
<tr>
<td>Joint evaluation</td>
<td>51.83</td>
<td>51.58</td>
</tr>
</tbody>
</table>

Source: Hsee (1998)

Attractiveness of Simple Gambles

Joint evaluation

Mean attractiveness (0-20 scale)

Gamble 1: 7/36 chance to win $9, otherwise win nothing
Gamble 2: 7/36 chance to win $9, 29/36 chance to lose $5

9.8

But, when these gambles are judged separately, the loss gamble is rated as more attractive.
Attractiveness of Simple Gambles
Separate Evaluation

Gamble 1: 7/36 chance to win $9
9.4
Otherwise win nothing

Gamble 2: 7/36 chance to win $9
14.3
29/36 chance to lose $5

Choice Responses

Group 1 (N=50)
7/36 win $9 vs. $2 for certain
33% vs. 67%

Group 2 (N=50)
7/36 win $9
81%
29/36 lose $0.05 vs. $2 for certain
39%

Evaluating the Attractiveness of a List

Median Responses

An Affect Account of the 5¢ Loss Effect

Probability is evaluable.
7/36 is a poor chance.

Payoff is less evaluable.
How good or bad is $9?

Adding the 5¢ loss makes $9 "come alive with feeling" and it then becomes weighted in the judgment.

Distribution of bad/good ratings for $9
(In percent)

<table>
<thead>
<tr>
<th>Rating</th>
<th>A (9,0)</th>
<th>B (9, -5¢)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4 (very bad)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>-3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>-2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>-1</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>0 (neutral)</td>
<td>40</td>
<td>21</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>4 (very good)</td>
<td>6</td>
<td>20</td>
</tr>
</tbody>
</table>
What Have We Learned from the Gambles?

- the importance of contextual factors in determining affect and preference
- the fact that meaning, utility, and weighting of even a very familiar and "well-understood" monetary outcome such as $9 is not fixed, but depends greatly on these contextual factors

The Robustness of the Asymmetrically Dominated Effect: Buying Frames, Phantom Alternatives, and In-Store Purchases

John R. Fugate
University of Illinois

Pamela G. Gorman, Gregor H. Boyce, and Paul W. Berman
University of Illinois

Abstract

This research explores the robustness of the asymmetrically dominated effect, where the individual is indifferent between two options (A and B) and wants another option C that is clearly inferior to both A and B. The study utilized a written survey experiment with a between-subjects design involving three conditions: (1) a choice between A or B, (2) a choice between A or C, and (3) a choice between B or C. The results indicated that the asymmetrically dominated effect was robust in all three conditions. Furthermore, the study also examined the relationship between the asymmetrically dominated effect and other factors such as risk perception and decision-making style.

I came to appreciate the importance of affect by studying

1) Risk perception and dread
2) Nuclear Waste imagery
3) The inverse relation between perceived risk and perceived benefit

The Relationship between Risk and Benefit in People's Minds

[Graph showing the inverse relationship between risk and benefit]
About 15 years later Atahakani and Slovic found that:

The inverse (negative) relationship between risk and benefit judgments for a particular hazard (e.g., nuclear power) depends on the degree to which that hazardous activity is judged to be: good or bad.

The Affect Heuristic

A model of the affect heuristic explaining the risk/benefit confounding observed by Atahakani and Slovic (1994). Judgments of risk and benefit are assumed to be derived by reference to an overall affective evaluation of the stimulus item.

Study 1: Risk and Benefit Judgments under Time Pressure

- Time pressure reduces opportunity for analytic deliberation, and increases reliance on affect
- Prediction: Under time pressure people are more likely to use the affect heuristic to make judgments

Results: Time pressure increases the inverse relationship between risk and benefit.
Study 2: Manipulating Affect by Presenting Risk and Benefit Information

Technique: provide information to change overall impression, e.g., create a more favorable expectation of nuclear power with info that high benefits, perceived risk should then decrease.

- Nuclear Power
- Information about benefits
- Intense, positive

- Nuclear Power
- Information about risks
- Intense, negative

Study showing how information about benefits (A) or information about risks (B) could lead to different estimates of nuclear power and lead to interventions about risk and benefits that increase affectively with the information given. Similarly, information could decrease the overall estimate evaluation of nuclear power as in C and D.

Source: Rose et al. (2003).

Involuntary Cautions to Others in Florida Following Attacks of September 11, 2001

Geurina et al.

Psychiatric Settings

"Our findings support the hypothesis that in the weeks immediately following the attacks of September 11, 2001, law enforcement personnel in Florida received more requests and concerns for psychological evaluations to avoid harm to others than expected from history and from the mental health professionals."

Emotional and Deliberative Reactions to a Public Crisis: Madrid Bombing in Spain

M. Aran Kor, C. Kears, and C. Gun


Abstract

"We used a novel mechanism—the Madrid crisis in Spain—to investigate how emotion and reason relate when they conflict."

- A field study showed that individuals who were bomb explosion victims in Madrid and had been affected by the attack's emotional impact were more likely to engage in emotional than in cognitive deliberations about the process of the government's actions.

RISK COMMUNICATION:

A patient—Mr. Jones—has been evaluated for discharge from an acute care mental health facility where he has been treated for the past several weeks. A psychologist who has been asked for an assessment of Mr. Jones. Among the conclusions reached in the psychologist's assessment is the following:

EITHER:

Patients similar to Mr. Jones are estimated to have a 20% probability of committing an act of violence to others during the first several months after discharge.

OR:

Of every 100 patients similar to Mr. Jones, 20 are estimated to commit an act of violence to others during the first several months after discharge.

Probability and Relative Frequency

Are they the same or different in communicating risk?

e.g., 1% chance

1 out of 100
Question:

- If you were working as a supervisor at this mental health facility and received the psychologist's report, would you recommend that Mr. Jones be discharged from the hospital at the present time?

Patient Evaluation

A. 10%
- Very low probability
- Mortality rate: 1%
- Probably won't last very long, though

C. 10 out of 100
- Vast majority of people: 99.999%
- Mr. Jones committing an act of violence
- Psychiatric hospital for the past 10 years
- Life could be 1 out of 10
- Some may feel very vulnerable
- The patient: feeling isolated
- An act of violence
- Fear has to be at least 1 in 10; Mr. Jones could very well be that 1

Strong Affect Overcomes Probability

Payment to evade chance of medical risk is more affected by probability

Intuitive Toxicology — Main Result

Many people lack dose-response sensitivity for exposure to chemicals that can produce effects that are deemed to cause cancer (high affect).

If large exposures are bad, small exposures are also bad.

One of the weaknesses of system 1 is its insensitivity to the value of human life.

If I look at the mass, I will never act.
If I look at one, I will.

Mother Teresa
Most people are caring and will go to great effort to rescue "the one" whose needy plight comes to their attention.

These same good people however, often become numbly indifferent to the plight of "the one" who is "one of many" in a much greater problem.

Why does this occur?

The answer will help us answer a related question. Why do good people ignore mass murder and genocide?

Recommended Reading:

Genocide and Atrocities Perpetrated

- Armenia (1915)
- Ukraine (1932-33)
- Nazi Germany (Holocaust [World War II])
- Bangladesh (1971)
- Cambodia (1975-79)
- Genocide in the former Yugoslavia (1995-)
- Rwanda (1994)
- Zimbabwe (2000)
- Darfur (Today)
- Y (Somalia)

Rwanda (1994)

800,000 people murdered in 100 days
about 8,000 a day
while the world watched and did nothing

Since February 2003 the Sudanese government, working through the Janjaweed Militia has destroyed more than 1000 villages in Darfur, murdered as many as 400,000 people from those villages and driven some 2.5 million into refugee camps where their lives are in grave danger.

The world has done almost nothing in response!

WHY?
**Why do we ignore mass murder and genocide?**

**MANY ANSWERS:**
- Lack of leadership
- Dangerous, costly, difficult
- Racism
- Distance
- Lack of information
- Lack of compassion
- Ostrich effect
- Diffusion of responsibility
- Feelings of insufficiency — drop in the bucket effect
- Available information fails to convey affect and emotion

**How Should We Value the Saving of Human Lives?**

![Graph showing value of life saving vs. number of lives]

**A normative model:**
Every human life is of equal value

**But our actions in the face of mass murder do not follow either of these normative models. Our feelings override our analytic judgments!**

**How Should We Value the Saving of Human Lives?**

![Graph showing value of life saving vs. number of lives]

*Another normative model: Large losses threaten the viability of the group or society*

**So how does reliance on our feelings (using system 1) lead us to value lifesaving?**

Research identifies two descriptive models
- Psychophysical model
- Collapse model

**There are 1,198,500,000 people alive now in China. To get a feel for what this means, simply take yourself — in all your singularity, importance, complexity, and love — and multiply by 1,198,500,000. Soo? Nothing to it.**

-Annie Dillard, For the Time Being (1999)
Insensitivity to the Value of Human Life

I am deeply moved if I see one man suffering and would risk my life for him. Then I talk impersonally about the possible pulverization of our big cities, with a hundred million dead. I am unable to multiple one man's suffering by a hundred million.

Albert Savad Gypargi

Figure 1. The value function from Kahneman and Tversky's prospect theory. According to this function, a fixed reduction in number of lives lost (z) has more subjective value than when the starting point is a small number (x) than when the starting point is a large number (y).

Another descriptive model: The collapse of compassion. Our capacity to feel (good or bad) is limited. Valuation depends on feelings (the affect heuristic). Lack of feeling (value) leads to inaction as large losses of life occur in episodes of mass murder or genocide.

Journal of Applied Psychology, 1222-2149

Insensitivity to the Value of Human Life: A Study of Psychophysical Numbing

ERIK HARTMANN
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PETER E. SHERER
Department of Psychology, Stanford University, Stanford, California 94305-2145, USA

PETER M. HARTMAN

PETER E. SHERER

Reprinted from The Lancet with permission.
Result:
- The number of lives saved carries little affect.
- The proportion of lives saved carries much feeling:
  High % is good
  Low % is bad

The proportion of lives saved carries more affective meaning than the number of lives saved

For example, in separate evaluations there will likely be more support for saving 80% of 100 lives at risk than saving 20% of 1000 lives at risk.

This is because we feel little different when contemplating (separately) the saving of 100 lives or 1000 lives but we feel much better about saving 80% of something than about saving 20%. 

Airport Safety

Saving a percentage of 150 lives receives higher support ratings than does saving 160 lives.

Numbers and Numbness

- Conveying only the statistics of a mass murder or genocide, no matter how large the numbers, fails to convey the true meaning of such atrocities.
- The numbers represent "dry statistics" that fail to motivate action.

But isn't the numbing effect of statistics well known? I don't believe it is.
One man's death is a tragedy.
A million deaths is a statistic.

Joseph Stalin
(attributed)

The Nourishing Math of Darfur: The Dead Don't Add Up
By Mero Lacey
The New York Times
Wednesday 18 May 2005

Is the death toll between 60,000 and 160,000, as Deputy Secretary of State Robert B. Zoellick told reporters during a recent trip to the region?

Or is it closer to the roughly 400,000 dead reported recently by the Coalition for International Justice?

Those trying to tally the terror are engaging in guesswork for a cause. They say they are trying to count the dead to shock the world into stepping up the number that is rising higher than it already is.

"Statistics are human beings with the tears dried off"

How might we put the tears back on?

Answer: By communicating with images, narratives, personalized stories/faces.

SIX MILLION PAPER CLIPS
The Story of a Child's Obsessive Quest
The charity “Save the Children” knows this.

Save the Children

The face doesn’t have to be human

But there may be a limit to the ability of “faces” to prevail over numbers.

Donating money to save statistical and identified lives

- Statistical Lives
  - AIDS: 1,000,000 children in Africa
  - Tuberculosis: 3,000,000 children
  - Malaria: 1,000,000 children

- Identified Lives
  - Four million children need education
  - One million children need food
  - Eighty thousand children need medical care

Any money the guy donates will go to Save the Children with 95% going toward workforce, and 5% toward overhead.

But this is only the tip of the iceberg. Many more children are in need of help.
But it's not just large numbers that can interfere with feelings.

Research shows we attend less carefully to groups of people than we do to individuals.

We also generate less sympathy and donate less to groups.

 Interpretation:

Presence of statistics may have reduced the feeling (empathy, compassion) for Rotia, thus reducing donations to her.
The total amount of money needed was the same in both conditions

- 1 child – treatment costs $300,000
- 8 children – treatment costs $300,000

Will you donate?

How much?

"Compassion Fatigue"

"At what number do other individuals blur for me?"

Annie Dillard

My answer: individuals may begin to blur and compassion may begin to collapse at N=2!

Feelings and Donations Decline at N=2!

- Willingness to donate to Hoka and Mosse is less than donations to either child individually.
- Sympathetic feelings also decline at N=2.
- No wonder we do not respond at N = 400,000!!

• What is the psychology underlying the collapse of compassion?
• We cannot "wrap our minds" around two people as well as around one.

Research shows that
  - Attention diminishes as group size increases
  - Imagery is deficient with large numbers
  - Feeling collapses when group size becomes large

Conclusions
• The analytic and experiential (affective) systems of thought are exquisitely sophisticated and embody the essence of human rationality.
• Both systems, however, can lead us astray.
• Each system needs the other for guidance.
• Rationality is contingent, context dependent.
• We are rational actors and rational tools.

System 1 is needed
to
monitor System 2

The New York Times

SHUTTLE BREAKS UP, 7 DEAD
COLUMBIA, WITH SIX AMERICANS AND ISRAELI IN LAST OVER TEXAS AT START OF ITS DESCENT

AVIATION WEEK & SPACE TECHNOLOGY

Echoes of Challenger
Evidence growing that NASA's failure to fully implement lessons from the earlier accident played a key role in the loss of Columbia.
One of the problems was that a lack of hard data prevented the input of more common sense analysis.

The overriding emphasis on data—the kind of analysis that repeatedly produced “no flight safety risk” assessments involving Columbia’s external tank foam strike—prints NASA decision makers into a corner and fails to take advantage of engineering common sense that may not be backed up by specific data.

• "intuition and hunch" do not carry any weight. They do in everyday decision-making. But when it comes to formal decisions, hard data—numbers are required.

• . . . the underlying rules are that as engineers you have to have “the number” around which to base assessments, . . . "That basically means every flight becomes ‘data’ and that ‘concerns’ about an anomaly are not data—so a successful flight with an anomaly simply becomes data that say it’s safe to fly.

Just as System 1 is needed to monitor System 2

System 2 is needed to monitor System 1

What Might be Done About Genocide Neglect?

In the near term—for Darfur?

In the longer term—for humanity?

For the Longer Term... From Psychology to International Law

Understand the nature of moral intuitions and their strengths and weaknesses.

Moral intuitions tend to dominate moral judgments.

Moral Intuitions vs. Moral Arguments

Jon Haidt (2001) argues that moral intuitions (akin to System 1) typically precede moral judgments.

Specifically:

"...moral intuitions can be defined as the sudden apprehension in consciousness of a moral judgment, including an affective reaction (good, bad, the other) without any conscious awareness of having gone through steps of searching, weighing evidence, or inverting a conclusion. One sees or hears about a social event and one instantly feels apprehension or disapprobation" (p. 819; see also Haidt, 1997/1998 for an earlier version of this argument).

Darfur: For the Longer Term...

Moral intuitions, even with tears, are not enough!

System 1 (feelings) evolved to protect us as individuals and small groups.

System 1 is not a dependable motivator against Genocide. We cannot trust our moral intuitions to guide us in the face of mass murder and genocide.

Neuroimaging studies by Greene et al (2004) support the notion that cognitive control processes involving deliberate moral reasoning can override emotional/intuitive responses to achieve utilitarian goals (e.g., maximize lifesaving). See also Kahneman (2003).

- We thus need System 2 (articulate, reason-based, moral judgment) to create laws and institutions that will enforce proper attention to genocide. No more analogy to paying taxes.

- The Genocide Convention (1948) was supposed to do this, but it has failed. Can it be rewritten and enforced so as to commit us to respond appropriately to genocidal actions? Are there institutional arrangements that can be dedicated to combating genocide effectively?

Highly accessible impressions produced by System 1 control judgments and preferences, unless modified or overridden by the deliberative operations of System 2.

D. Kahneman, 2003, p.715

System 2 monitoring is quite lax and allows many intuitive judgments to be expressed, including some that are erroneous.

Frederick and Kahneman use simple puzzles to study cognitive self-monitoring.

A bat and a ball cost $1.10 in total. The bat costs $1 more than the ball. How much does the ball cost?

50% of Princeton students and 56% of University of Michigan students gave the wrong answer (10 cents).

On reflection, we can answer this question correctly.

Conclusions

- The analytic and experiential (affective) systems of thought are exquisitely sophisticated and embody the essence of human rationality.
- Both systems, however, can lead us astray.
- Each system needs the other for guidance.
- Rationality is contingent, context dependent.
- We are rational actors and rational fools.
Thinking of Drinking and Driving?

Check your bank account first!

Do you have an extra $7,000-$20,000 handy?

$7,000-$20,000

That's how much you will spend on a routine DUI. That's without crashing your car or hurting anybody.

Take a look at our breakdown of the cost of a DUI and remember, our figures are for a simple DUI arrest with no auto repairs, hospitals, lawsuits, or loss of work from time in jail.

Our mission is to promote DUI prevention through education and to provide easy access to DUI-related services.

SMART CHOICES
DUI

A Costly Mistake

Variable Costs

Three of the bills you will pay are variable. At their low end, each is very expensive.

Fine
$390 - $1,200
Your fine depends on the circumstances of your case and the personal decision of your Judge.

Attorney Fees
$500 - $10,000
Lawyers charge higher prices in highly populated areas. Quality is a huge factor in price too!

Insurance Rate Increase
$3,600—$6,600
A DUI will increase your rates significantly for at least 3 years.

SUBTOTAL
$4,490 - $17,800

But wait, there’s more!

Standard Costs

There is also a list of smaller Standard fees and bills you have to pay which add up considerably.

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penalty Assessment</td>
<td>$666</td>
</tr>
<tr>
<td>State Restitution Fund</td>
<td>$100</td>
</tr>
<tr>
<td>Alcohol-Abuse Education Fund</td>
<td>$50</td>
</tr>
<tr>
<td>Blood or Breath Testing Fee</td>
<td>$37</td>
</tr>
<tr>
<td>Jail Cite and Release Fee</td>
<td>$10</td>
</tr>
<tr>
<td>Driving/Alcohol Awareness School</td>
<td>$500</td>
</tr>
<tr>
<td>License Reissue Fee</td>
<td>$100</td>
</tr>
<tr>
<td>Towing and Storage</td>
<td>$187</td>
</tr>
<tr>
<td>Total</td>
<td>$1,550</td>
</tr>
</tbody>
</table>

Grand Total
$6,140 - $19,450

Thinking of Drinking and Driving? Check your bank account first. Can you afford it?

Contact us for more information

DrinkingAndDriving.Org
A Non Profit Corporation

Phone: 888-592-9000
Fax: 704-356-6183
E-mail: smart@drinkinganddriving.org
Advertising

According to the American Marketing Association:

“Mass, paid communication, the purpose of which is to impart information, develop attitudes, and induce favorable action for the advertiser.”

Target Market Variables

- Age
- Income
- Education
- Race
- Gender
- Religion
- National origin
- Place of residence
- Life style

Customers' Perceptions of Products

- Revlon: Cosmetics sell “hope”
- Black and Decker: Drills sell “holics”

Market Objectives

- Build market share
- Build traffic
- Emphasize low price image
- Desensitize customers to price
- Create attention and interest
- Achieve future growth
- Maintain current market share
Market Segmentation

The division of a market into different homogeneous groups of consumers is known as **market segmentation**.

Rather than offer the same **marketing mix** to vastly different customers, market segmentation makes it possible for firms to tailor the marketing mix for specific target markets, thus better satisfying customer needs. Not all elements of the marketing mix are necessarily changed from one segment to the next. For example, in some cases only the promotional campaigns would differ.

A market segment should be:

- measurable
- accessible by communication and distribution channels
- different in its response to a marketing mix
- durable (not changing too quickly)
- substantial enough to be profitable

A market can be segmented by various bases, and industrial markets are segmented somewhat differently from consumer markets, as described below.

**Consumer Market Segmentation**

A basis for segmentation is a factor that varies among groups within a market, but that is consistent within groups. One can identify four primary bases on which to segment a consumer market:

- **Geographic segmentation** is based on regional variables such as region, climate, population density, and population growth rate.
- **Demographic segmentation** is based on variables such as age, gender, ethnicity, education, occupation, income, and family status.
- **Psychographic segmentation** is based on variables such as values, attitudes, and lifestyle.
- **Behavioral segmentation** is based on variables such as usage rate and patterns, price sensitivity, brand loyalty, and benefits sought.

The optimal bases on which to segment the market depend on the particular situation and are determined by **marketing research**, market trends, and managerial judgment.
Business Market Segmentation

While many of the consumer market segmentation bases can be applied to businesses and organizations, the different nature of business markets often leads to segmentation on the following bases:

- **Geographic segmentation** - based on regional variables such as customer concentration, regional industrial growth rate, and international macroeconomic factors.
- **Customer type** - based on factors such as the size of the organization, its industry, position in the value chain, etc.
- **Buyer behavior** - based on factors such as loyalty to suppliers, usage patterns, and order size.

Profiling the Segments

The identified market segments are summarized by profiles, often given a descriptive name. From these profiles, the attractiveness of each segment can be evaluated and a target market segment selected.
The Marketing Mix
(The 4 P's of Marketing)

The major marketing management decisions can be classified in one of the following four categories:

- Product
- Price
- Place (distribution)
- Promotion

These variables are known as the marketing mix or the 4 P's of marketing. They are the variables that marketing managers can control in order to best satisfy customers in the target market.

**Product**

The product is the physical product or service offered to the consumer. In the case of physical products, it also refers to any services or conveniences that are part of the offering.

Product decisions include aspects such as function, appearance, packaging, service, warranty, etc.

**Price**

Pricing decisions should take into account profit margins and the probable pricing response of competitors. Pricing includes not only the list price, but also discounts, financing, and other options such as leasing.

**Place**

Place (or placement) decisions are those associated with channels of distribution that serve as the means for getting the product to the target customers. The distribution system performs transactional, logistical, and facilitating functions.

Distribution decisions include market coverage, channel member selection, logistics, and levels of service.

**Promotion**

Promotion decisions are those related to communicating and selling to potential consumers. Since these costs can be large in proportion to the product price, a break-even analysis should be
performed when making promotion decisions. It is useful to know the value of a customer in order to determine whether additional customers are worth the cost of acquiring them.

Promotion decisions involve advertising, public relations, media types, etc.

A Summary Table of the Marketing Mix

The following table summarizes the marketing mix decisions, including a list of some of the aspects of each of the 4Ps.

<table>
<thead>
<tr>
<th>Product</th>
<th>Price</th>
<th>Place</th>
<th>Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionality</td>
<td>List price</td>
<td>Channel members</td>
<td>Advertising</td>
</tr>
<tr>
<td>Appearance</td>
<td>Discounts</td>
<td>Channel motivation</td>
<td>Personal selling</td>
</tr>
<tr>
<td>Quality</td>
<td>Allowances</td>
<td>Market coverage</td>
<td>Public relations</td>
</tr>
<tr>
<td>Packaging</td>
<td>Financing</td>
<td>Locations</td>
<td>Message</td>
</tr>
<tr>
<td>Brand</td>
<td>Leasing options</td>
<td>Logistics</td>
<td>Media</td>
</tr>
<tr>
<td>Warranty</td>
<td></td>
<td>Service levels</td>
<td>Budget</td>
</tr>
<tr>
<td>Service/Support</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I. Executive Summary

A high-level summary of the marketing plan.

II. The Challenge

Brief description of product to be marketed and associated goals, such as sales figures and strategic goals.

III. Situation Analysis

Company Analysis

- Goals
- Focus
- Culture
- Strengths
- Weaknesses
- Market share

Customer Analysis

- Number
- Type
- Value drivers
- Decision process
- Concentration of customer base for particular products

Competitor Analysis

- Market position
- Strengths
- Weaknesses
- Market shares

Collaborators
• Subsidiaries, joint ventures, and distributors, etc.

Climate

Macro-environmental PEST analysis:

• Political and legal environment
• Economic environment
• Social and cultural environment
• Technological environment

SWOT Analysis

A SWOT analysis of the business environment can be performed by organizing the environmental factors as follows:

• The firm's internal attributes can be classed as strengths and weaknesses.
• The external environment presents opportunities and threats.

IV. Market Segmentation

Present a description of the market segmentation as follows:

Segment 1

• Description
• Percent of sales
• What they want
• How they use product
• Support requirements
• How to reach them
• Price sensitivity

V. Alternative Marketing Strategies

List and discuss the alternatives that were considered before arriving at the recommended strategy. Alternatives might include discontinuing a product, re-branding, positioning as a premium or value product, etc.

VI. Selected Marketing Strategy

Discuss why the strategy was selected, then the marketing mix decisions (4 P's) of product, price, place (distribution), and promotion.

Product
The product decisions should consider the product's advantages and how they will be leveraged. Product decisions should include:

- Brand name
- Quality
- Scope of product line
- Warranty
- Packaging

**Price**

Discuss pricing strategy, expected volume, and decisions for the following pricing variables:

- List price
- Discounts
- Bundling
- Payment terms and financing options
- Leasing options

**Distribution (Place)**

Decision variables include:

- Distribution channels, such as direct, retail, distributors & intermediates
- Motivating the channel - for example, distributor margins
- Criteria for evaluating distributors
- Locations
- Logistics, including transportation, warehousing, and order fulfilment

**Promotion**

- Advertising, including how much and which media.
- Public relations
- Promotional programs
- Budget; determine break-even point for any additional spending
- Projected results of the promotional programs

**VII. Short & Long-Term Projections**

The selected strategy's immediate effects, expected long-term results, and any special actions required to achieve them. This section may include forecasts of revenues and expenses as well as the results of a break-even analysis.
http://www.quickmba.com/marketing/research/

http://gmx.xmu.edu.cn/ews/business/pmarketing/chapter01.htm#issues

Key Terms:

marketing
A social and managerial process whereby individuals and groups obtain what they need and want through creating and exchanging products and value with others.

need
A state of felt deprivation.

want
The form taken by a human need as shaped by culture and individual personality.

demands
Human wants that are backed by buying power.

product
Anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need. It includes physical objects, services, persons, places, organizations, and ideas.

service
Any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything.

customer value
The difference between the values the customer gains from owning and using a product and the costs of obtaining the product.

customer satisfaction
The extent to which a product's perceived performance matches a buyer's expectations. If the product's performance falls short of expectations, the buyer is dissatisfied. If performance matches or exceeds expectations, the buyer is satisfied or delighted.

total quality management (TQM)
Programs designed to constantly improve the quality of products, services, and marketing processes.

exchange
The act of obtaining a desired object from someone by offering something in return.
transaction
A trade between two parties that involves at least two things of value, agreed-upon conditions, a time of agreement, and a place of agreement.

relationship marketing
The process of creating, maintaining, and enhancing strong, value-laden relationships with customers and other stakeholders.

market
The set of all actual and potential buyers of a product or service.

marketing management
The analysis, planning, implementation, and control of programs designed to create, build, and maintain beneficial exchanges with target buyers for the purpose of achieving organizational objectives.

demarketing
Marketing to reduce demand temporarily or permanently; the aim is not to destroy demand, but only to reduce or shift it.

production concept
The philosophy that consumers will favor products that are available and highly affordable and that management should therefore focus on improving production and distribution efficiency.

product concept
The idea that consumers will favor products that offer the most quality, performance, and features and that the organization should therefore devote its energy to making continuous product improvements. A detailed version of the new-product idea stated in meaningful consumer terms.

selling concept
The idea that consumers will not buy enough of the organization’s products unless the organization undertakes a large-scale selling and promotion effort.

marketing concept
The marketing management philosophy that holds that achieving organizational goals depends on determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors do.

societal marketing concept
The idea that the organization should determine the needs, wants, and interests of target markets and deliver the desired satisfactions more effectively and efficiently than do competitors in a way that maintains or improves the consumer’s and society’s well being.
internet (or the Net)

The vast and burgeoning global web of computer networks with no central management or ownership.

The Marketing Concept

The marketing concept holds that achieving organizational goals depends on determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors do. The marketing concept has been stated in colorful ways, such as "We make it happen for you" (Marriott); "To fly, to serve" (British Airways); "We're not satisfied until you are" (GE); and "Let us exceed your expectations" (Celebrity Cruise Lines).

The selling concept and the marketing concept are sometimes confused. Figure 1.4 compares the two concepts. The selling concept takes an inside-out perspective. It starts with the factory, focuses on the company's existing products, and calls for heavy selling and promotion to obtain profitable sales. It focuses primarily on customer conquest—getting short-term sales with little concern about who buys or why.

![Figure 1.4](image)

In contrast, the marketing concept takes an outside-in perspective. As Herb Kelleher, Southwest Airlines's colorful CEO, puts it, "We don't have a Marketing Department; we have a Customer Department." The marketing concept starts with a well-defined market, focuses on customer needs, coordinates all the marketing activities affecting customers, and makes profits by creating long-term customer relationships based on customer value and satisfaction. Thus, under the marketing concept, customer focus and value are the paths to sales and profits. In the words of one Ford executive, "If we're not customer driven, our cars won't be either."

Many successful and well-known companies have adopted the marketing concept. Procter & Gamble, Disney, Wal-Mart, Marriott, Nordstrom, Dell Computer, and Southwest Airlines follow it faithfully. The goal is to build customer satisfaction into the very fabric of the firm. L.L. Bean, the highly successful catalog retailer, was founded on the marketing concept. In 1912, in his first
circulars, L.L. Bean included the following notice: "I do not consider a sale complete until goods are worn out and the customer still is satisfied. We will thank anyone to return goods that are not perfectly satisfactory. . . . Above all things we wish to avoid having a dissatisfied customer."

After loss of son in crash, mom starts foundation to combat teen drinking

Don Markus, The Baltimore Sun

6:33 PM EST, November 26, 2010

Nancy Davis sobbed in the courtroom the day that David Erdman was sentenced to 18 months in the Howard County Detention Center. Those tears were not for her son, Steven Dankos, who was killed last Nov. 29 after being thrown from Erdman's pickup truck when it crashed and overturned.

The tears were for Erdman, who in April had pleaded guilty to negligent homicide while driving under the influence of alcohol. "That day ... was for David. I didn't want him to go to jail," she recalled this week, as the one-year anniversary of her son's death neared.

Though Erdman was responsible for her son's death, the two have found a common mission: trying to change the culture of drinking and driving, particularly among high school and college students.

Davis is creating a nonprofit foundation in her son's name and will host a fundraiser Saturday with a 5K race at Centennial Park in Howard County. Erdman, meanwhile, is contemplating how he will make an impact once released from jail.

"I can't say that it will work out the way that I want, but I think it might be easier for a guy in my position to deliver a message to kids who are younger," Erdman, 23, said recently by phone from the jail. "I think they might be able to relate to something that I say than somebody who's older."

Davis hopes that this weekend's fundraising event will make kids think twice about attending parties where drinking occurs — as her son did the night of the deadly crash. "[H]opefully, if [kids] all get together and can realize why they're together, they'll think about what they're doing that night."

Erdman, a former All-American lineman at Wesley College in Dover, Del., was driving his younger brother, Thomas — who was Dankos' best friend and football teammate at River Hill High School — and Dankos back from a party where they and other high school and college students had been drinking. Police said that David Erdman's blood-alcohol level was nearly three times the legal limit.

Two days after the 17-year-old Dankos died, Erdman went to Davis' house to offer his apology.

"There's no doubt, it was the single hardest thing I ever had to do in my life," he recalled. "The only
thing I could say was, 'Sorry,' I couldn't take anything back. I can't redo any of it."

That visit was the first step in allowing Davis to forgive Erdman for what happened.

She had met him only a couple of times before the accident, but she says her son spoke highly of him. And though she has not talked to Erdman since he visited to apologize, she hopes "to do something together" for the foundation after he is released next year.

What anger she's had over her son's death has been directed at the family who hosted the party where Dankos and the Erdman brothers had been drinking. Linda Stapf of Ellicott City was cited by county police this year for allowing a minor who is not a family member to possess or consume alcohol in her residence. Stapf is scheduled to stand trial in December and could be fined up to $2,500.

Davis doesn't know Stapf, but believes it's common for adults in the River Hill community to let minors drink in their homes, something she didn't permit her son and his friends to do. Parents "have the idea that if the kids are in their home, everyone's safe," Davis said.

Erdman said, "I don't want to put anything that I did" on Stapf. But he added, "A parent should be a parent; a parent should not let that happen."

Davis and Erdman know that the battle against teen drinking and driving is almost unwinnable. Her 15-year-old daughter, Lauren, a River Hill sophomore, told Davis last spring that "nothing has changed" among high school students.

Erdman, who came to understand his own problem with alcohol after undergoing an intensive outpatient rehabilitation program as a result of the accident, said that among college students and young adults, "drinking and driving goes on, it's kind of inevitable."

Erdman particularly wants to talk with his younger brother, Thomas, who attends Howard Community College. "I talk with my brother, but we really haven't had a specific conversation about anything that happened that night," David Erdman said. "I don't know if we're just putting it off, but ... I never really felt it was the right time to do it.

"He lost his best friend, and I ended up in here."

Some have taken Dankos' death to heart.

Nick Bonhag, who was Dankos' teammate at River Hill and now plays football as a freshman at Shepherd University in West Virginia, said that many of Dankos' close friends stopped or significantly curtailed their drinking after he was killed.

"People ask me up here, 'Why don't you drink?" Bonhag said. "I explain the story of what happened. They respect my decision ... but they don't change their ways because it hasn't hit them like it hit me."

Davis worries about her daughter when she's out with friends. "I've threatened her," said Davis, who also has a son, Zachary, 10. "I told her, I'm not losing two."

Davis also worries about the Erdmans. She gave Dankos' dog, a boxer named Sophie, to Thomas Erdman last spring. She called a recent visit with Erdman's parents, David and Wanda, at their Ellicott City home "beneficial" in helping her deal with her son's death.
"They loved Steven," she said. "Not only did they lose Steven, but their son is not there. ... It just killed me when he went to jail."

Erdman said that despite Davis' wishes that he not go to jail, he understands why Circuit Judge Diane O. Leasure sentenced him to five years, with all but 18 months suspended. "You can't have somebody do what I did. ... You have to be punished," he said.

Erdman, who hopes to finish the credits for his accounting degree, said a construction job on work release keeps him "centered." But in jail at night and on weekends, Erdman's mind occasionally returns to that November night a year ago.

When released, he plans to seek therapy to help deal with the guilt he still feels.

"I don't think I'll be able to get over most of what happened," he said. "I think it will take me a while to forgive myself for what I did. I don't want to ever put myself in a situation like that again."

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How a DUI conviction affects your car insurance

By Insure.com

Last updated September 27, 2010

If you’ve been convicted of driving under the influence (DUI) of alcohol or drugs, it will likely drive your car insurance rates through the roof.

According to the Insurance Information Institute (III), there is an alcohol-related traffic fatality in the United States every 45 minutes. Aside from the risk of killing yourself and others, a drunk driving conviction carries with it serious penalty from your car insurance company.

Auto insurance companies may check your motor vehicle record only once every three years or when you’re applying for a new policy. It’s possible that accidents, tickets and DUIs may never make their way to your official motor vehicle record. However, if your insurer discovers your DUI and classifies you as a "high-risk driver," shopping around at renewal time is the best strategy, as rates will vary greatly among auto insurers. On the other hand, a rate hike may be the least of your problems; your policy could be cancelled or nonrenewed, especially if you are currently in a preferred rate class. Then you'll be forced to look for new car insurance with the double-whammy of a DUI and a cancellation on your record.

Laws regarding DUIs and car insurance coverage vary by state. Most states require DUI offenders to get a form called an SR-22 from their auto insurers, so you can't hide. This form proves to the DMV that you carry liability insurance and removes your license suspension. An SR-22 also requires your insurance company to notify your state’s department of motor vehicles (DMV) if it cancels your auto insurance for any reason. You'll likely have to file proof of insurance for three — sometimes five — years with your state's DMV.

Some car insurance companies don't even offer SR-22 policies, so your policy could be nonrenewed or cancelled because your company can no longer provide what you need.
Insurers can miss DUI convictions

It's possible that your insurance company will never find out about your DUI conviction if your state does not require you to seek an SR-22. According to the Insurance Research Council, as many as one in five convictions for traffic violations never end up on motor vehicle records due to lack of shared information between courts and motor vehicle departments, or because a conviction has been erased through alternative means, such as driving school. If you get your DUI charge reduced in a plea bargain, or have a limited license suspension, such as 30 days, it's also very unlikely your insurer will find out about your conviction.

If your insurance company misses the conviction at the time it happens, it may still have a few years to raise rates if the DUI is discovered later.

For example, State Farm's action depends on which subsidiary you're with. The insurer reviews rate-increase decisions on a case-by-case basis. If you have a preferred policy with State Farm Mutual Insurance Co. and receive a DUI, State Farm will likely move you into State Farm Fire & Casualty, which is its standard-policy company for riskier drivers and higher rates.

If you're with Progressive, you will not face nonrenewal or cancellation because of a DUI, but you may face a rate increase. Progressive also reviews rates on a case-by-case basis, with multiple factors such as age, gender, driving history and your vehicle model going into your rate.

It doesn't end there. Your DUI conviction will follow you if you apply for life insurance and could affect your premiums there, too.

http://www.insure.com/car-insurance/drunk-driving-penalties.html
Sue Gorcowski • Kathryn Henry • Susan McMee
Office of Communications and Consumer Information
National Highway Traffic Safety Administration
Agenda

- New impaired driving enforcement tagline to replace Drunk Driving. Over the Limit. Under Arrest.
- Holiday Buzzed Microsite
- BUA Microsite
- Communications Forum 2011
Stakeholders Meeting

August 10, 2010

Agencies Represented: National Center for DWI Courts, National Sheriffs’ Association, National Traffic Law Center, American Probation and Parole Association, Governors Highway Safety Association, International Association of Chiefs of Police, Mothers Against Drunk Driving, Iowa Department of Inspections and Appeals
Top of Mind Associations About HVE

- “If they can’t see it, they don’t believe it”
- Need to know what type of enforcement is happening
- Consequences – embarrassment, arrests, financial impact, prosecution, consistent convictions
- Increased publicity with the message that law enforcement is out for public safety
Feelings About the Primary Audience

- Men 21-34 difficult to reach with traditional media
- Treat driving impaired as a rite of passage
- Invincible - cannot be caught
- Live in the moment, instant gratification
- Susceptible to peer pressure
- Will get off easily for first offense
Words to Stay Away From

- Drunk. Brings to mind stumbling, falling down
drunk

- Limit. Ambiguous. How will a drinker know when he/she has reached the "limit" to drive safely?

- Trashed. Implies too far gone

- Hammered. Too far gone

- Jail. Not a viable consequence
Conclusions – Tagline should:

- State or strongly imply a consequence
- Be careful of using slang
- Speak at a personal level
- Communicate "impairment" and be believable
- Be memorable
- Be clear and concise
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>November 2010</td>
<td>New tagline concepts presented to NHTSA</td>
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<tr>
<td>March 2011</td>
<td>Tagline Focus Groups</td>
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<tr>
<td>May 2011</td>
<td>Final tagline &amp; concept approval</td>
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<tr>
<td>May 2011</td>
<td>Contractor presents logos to NHTSA</td>
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<tr>
<td>June 2011</td>
<td>Television shoot, edit</td>
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<td>July 2011</td>
<td>Network clearance of spots</td>
</tr>
<tr>
<td>August 2011</td>
<td>Spots trafficked to networks/States custom tagged</td>
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<tr>
<td>August 17, 2011</td>
<td>Two week flight begins</td>
</tr>
<tr>
<td>August 19, 2011</td>
<td>Crackdown begins</td>
</tr>
</tbody>
</table>
Holiday Enforcement
Campaign 2010

- Event – December 13, 2010
- No Refusal Weekend

Flight Dates
- Thursday, December 16 – Sunday, December 19, 2010
- Thursday, December 23 – Thursday, December 30, 2010

12 Days on Air
Holiday Season 2010
Enforcement Planner

Seasons Greetings
from your pals in the squad

Too much off the party punch? There’s no way to hide it.
Holiday Site: Buzzed

- Consumer-focused microsite to encourage target audience to help spread the word about impaired driving

Components include:
- Downloadable posters
- Banner ads
- Interactive buzzed driving "experience"
- E-vite

Social media components

Unique URL (HolidayBuzzed.com) to play off campaign taglines
Interactive Microsite

Buddled Driving

According to research by the National Highway Traffic Safety Administration, every 43 minutes and 32 times a day, someone in the United States dies in an alcohol-impaired driving crash. The holiday season between Thanksgiving and New Year's can be one of the deadliest times on America’s roadways, due to an increase in drunk driving.

In fact, in 2008 during the month of December, 3,074 people were killed in crashes on America’s roadways. Of those deaths, 868 people were killed in crashes that involved a driver or motorcycle rider with a blood alcohol concentration (BAC) of 0.08 or higher.

Remember buzzed driving is drunk driving. The results from driving and driving while under the influence of alcohol can end up costly no matter how many drinks you've had. Violators often face jail time, higher insurance rates, and dozens of other unanticipated expenses-including attorney's fees, court costs, towing, repairs, and lost work time.

DON'T GET BEHIND THE WHEEL OF A VEHICLE WHEN YOU ARE IMPAIRED. ALWAYS:

- Plan a safe ride home before the festivities begin.
- Select a designated sober driver and know your car keys are safe.
- If you're impaired, use a taxi, ride sharing app, or walk just a few blocks to the nearest public transportation or safe ride home service.
Interactive Microsite

Get the Word out

There are a lot of ways to spread the word about the dangers of buzzed driving this holiday season. Use as many of them as you can to make a difference and help save lives!

Select from a number of cool posters to print and post or to share on Facebook and Twitter as email. We've made it simple for you to make a visual impact about the dangers of buzzed driving.
Interactive Microsite

Get the Word out

ACTION PLANS

SCHOOLS

There are lots of ways to spread the word about the dangers of distracted driving this holiday season. Use any one of these ideas:

- Buzzed Driving: Spread the word about the dangers of distracted driving.
- Avoid holiday buzz: Educate others about the dangers of distracted driving.
- Schools: Encourage students to spread the word about the dangers of distracted driving.

These ideas can help you make a difference and help keep families safe.
Interactive Microsite

Get the Word out

There are a lot of ways to spread the word about the dangers of buzzed driving this holiday season. Use as many of them as you can to make a difference and help save lives!

ACTION PLANS

INDIVIDUALS

1. **Tell your friends and family about the dangers of buzzed driving**. Share relevant information with them and encourage them to be safe drivers.

2. **Stay connected**. Join social media groups or communities that focus on safe driving and share your experiences and knowledge.

3. **Volunteer**. Participate in local events or drive training sessions to educate others about the importance of driving sober.

4. **Support organizations**. Donate to or volunteer for organizations that work to prevent drunk driving, such as the National Institute on Alcohol Abuse and Alcoholism (NIAAA).

5. **Spread awareness**. Use social media platforms to share information about the dangers of buzzed driving, including statistics, personal stories, and tips for staying safe.

6. **Stay informed**. Read up on the latest research and news related to drunk driving prevention and make informed decisions about your driving.

7. **Be a role model**. Set a good example by never driving under the influence and always advocate for safe driving practices.

POSTERS

- **Make posters**. Create posters or other visual materials that highlight the risks of buzzed driving and distribute them in public places like community centers, schools, and workplaces.

- **Display posters**. Hang posters in visible areas to raise awareness about the dangers of buzzed driving.

E-CARD

- **Create digital content**. Develop videos, blogs, or webinars that educate people about the dangers of buzzed driving.

- **Share digitally**. Distribute these materials on your social media accounts, website, or email list to reach a larger audience.

ORGANIZATIONS

- **Contact local organizations**. Reach out to local organizations, schools, and businesses to coordinate buzzed driving prevention efforts.

- **Collaborate with others**. Partner with other organizations to increase the impact of your buzzed driving prevention efforts.

SCHOOLS

- **Educate students**. Work with schools to incorporate buzzed driving prevention education into their curricula.

- **Host events**. Organize events like assemblies or workshops to educate students about the dangers of buzzed driving.

BANNERS

- **Create banners**. Develop banners that can be used in public places to raise awareness about the dangers of buzzed driving.

- **Display banners**. Hang banners in areas where they can be seen by a large audience.

INDIVIDUALS

- **Spread the word**. Encourage friends, family, and others to take action against buzzed driving.

- **Be proactive**. Take steps to ensure your own safety and the safety of others by choosing not to drive buzzed.

MICROSITES

- **Build a microsite**. Create a dedicated website or online resource to provide information and resources on buzzed driving prevention.

- **Promote online**. Use the microsite to educate people about the dangers of buzzed driving and provide resources for action.

MICROSITES

- **Support microsites**. Join or support organizations that create online resources to promote buzzed driving prevention.

- **Contribute content**. Share your own experiences and knowledge on buzzed driving prevention to support these efforts.

Social Media

- **Use social media**. Share information about the dangers of buzzed driving on social media platforms to reach a wider audience.

- **Engage with followers**. Respond to comments and questions to promote engagement and encourage others to take action.

- **Follow others**. Follow other organizations and individuals who are also focused on buzzed driving prevention to stay informed and connected.

Post the banner ads on your blog or Facebook page.
Interactive Microsite

Get the Word Out

There are a lot of ways to spread the word about the dangers of buzzed driving this holiday season. Use as many of them as you can to make a difference and help save lives!

Play Holiday Hazard

Avoid the Holiday Buzz

Get the Word Out

Holiday Hazard

Links

Rushed Driving is Drunk Driving

Action Plan: Schools

Action Plan: Organizations

Action Plan: Individuals

Post these cool visual aids that bring viewers here so they can also make a difference... and get the word out!
Interactive Microsite

Links

Learn More About the Dangers of Drunk Driving

- NHTSA.gov
- TrafficSafetyMarking.gov
- StopImpairedDriving.org
Holiday E-vite

THINK YOU CAN DRIVE BUZZED?
SHAKE THE GLobe TO FIND OUT

SHAKE IT!
Communications Forum

Coming in 2011
This document is an introductory study guide

It's for anyone who is trying to read all of the cognitive biases so they can better understand human thought and behavior. It's based off of the latest Wikipedia entry for cognitive biases (http://en.wikipedia.org/wiki/Cognitive_bias) and because Wikipedia articles are always a work in progress, this should be thought of as a starting point to study more professionally produced material such as Stuart Sutherland's "Irrationality". Cordelia Fine's "A Mind of Its Own", Scott Plou's "The Psychology of Judgement and Decision Making", Thomas Kid's "Don't Believe Everything You Think."

Within, this document you will find each bias presented with a short description and an image to help aid the memory. Clicking on each bias will take you directly to the wiki page where you can learn more.

The biases are organized into slides that can be printed and mounted to mat board to make study guide cards.
Legal Information

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"The beginning of wisdom, is the definition of terms"
What is a cognitive bias?

Cognitive biases are psychological tendencies that cause the human brain to draw incorrect conclusions.

Such biases are thought to be a form of "cognitive shortcut", often based upon rules of thumb, and include errors in statistical judgment, social attribution, and memory.

These biases are a common outcome of human thought, and often drastically skew the reliability of anecdotal and legal evidence. The phenomenon is studied in cognitive science and social psychology.

Quoted from: http://en.wikipedia.org/wiki/Cognitive_bias
The notion of cognitive biases was introduced by Amos Tversky and Daniel Kahneman in 1972. and grew out of their experience of people's innumeracy, or inability to reason intuitively with the greater orders of magnitude. They and their colleagues demonstrated several replicable ways in which human judgments and decisions differ from rational choice theory. They explained these differences in terms of heuristics; rules which are simple for the brain to compute but introduce systematic errors. For instance the availability heuristic, when the ease with which something comes to mind is used to indicate how often (or how recently) it has been encountered.

These experiments grew into the heuristics and biases research program which spread beyond academic psychology into other disciplines including medicine and political science. It was a major factor in the emergence of behavioral economics, earning Kahneman a Nobel Prize in 2002. Tversky and Kahneman developed prospect theory as a more realistic alternative to rational choice theory. Other biases have been demonstrated in separate experiments, such as the confirmation bias demonstrated by Peter C. Wason.

Quoted from: http://en.wikipedia.org/wiki/Cognitive_bias
memory biases

probability / belief biases

social biases

decision-making biases
**19* social biases**

**Forer effect / Barnum effect**
The tendency to give high accuracy ratings to descriptions of their personality that supposedly are tailored specifically for them, but are in fact vague and general enough to apply to a wide range of people. For example, horoscopes.

**Ingroup bias**
The tendency for people to give preferential treatment to others they perceive to be members of their own groups.

**Self-fulfilling prophecy**
The tendency to engage in behaviors that elicit results which will (consciously or not) confirm existing attitudes.

**Halo effect**
The tendency for a person's positive or negative traits to "spill over" from one area of their personality to another in others' perceptions of them (see also physical attractiveness stereotype).

**Ultimate attribution error**
Similar to the fundamental attribution error, in this error a person is likely to make an internal attribution to an entire group instead of the individual within the group.

**False consensus effect**
The tendency for people to overestimate the degree to which others agree with them.

**Self-serving bias / Behavioral confirmation effect**
The tendency to claim more responsibility for successes than failures. It may also manifest itself as a tendency for people to evaluate ambiguous information in a way beneficial to their interests (see also group-serving bias).

**Notational bias**
A form of cultural bias in which the notational conventions of recording data bias the appearance of their data toward (or away from) the system upon which the notational schemas is based.

**Egocentric bias**
Occurs when people claim more responsibility for themselves for the results of a joint action than an outside observer would.

**Just-world phenomenon**
The tendency for people to believe that the world is just and therefore people "get what they deserve."

**Dunning-Kruger / Superiority Bias**
Overestimating one's desirable qualities, and underestimating undesirable qualities, relative to other people. Also known as Superainty bias (also known as "Lake Wobegon effect", "better-than-average effect", "superainty bias", or Dunning-Kruger effect).

**System justification effect / Status Quo Bias**
The tendency to defend and bolster the status quo. Existing social, economic, and political arrangements tend to be preferred, and alternatives discouraged, entirely at the expense of individuel and collective self-interest. (See also status quo bias.)

**Illusion of asymmetric insight**
People perceive their knowledge of their peers to surpass their peers' knowledge of them.

**Illusion of transparency**
People overestimate others' ability to know them, and they also overestimate their ability to know others.

**Herd instinct**
Common tendency to adopt the opinions and follow the behavior of the majority to feel safer and to avoid conflict.

**Fundamental attribution error / Actor-observer bias**
The tendency for people to over-emphasize personality-based explanations for behaviors observed in others, while under-emphasizing the role and power of situational influences on the same behavior. (See also actor-observer bias, group attribution error, positivity effect, and negativity effect.)

**Projection bias**
The tendency to unconsciously assume that others share the same or similar thoughts, beliefs, values, or positions.

**Outgroup homogeneity bias**
Individuals see members of their own group as being relatively more varied than members of other groups.

**Trait ascription bias**
The tendency for people to view themselves as relatively variable in terms of personality, behavior and mood while viewing others as much more predictable.
memory biases
8* memory biases

Suggestibility
A form of misattribution where ideas suggested by a questioner are mistaken for memory.

Reminiscence bump
The effect that people tend to recall more personal events from adolescence and early adulthood than from other lifetime periods.

Cryptomnesia / False memory
A form of misattribution where a memory is mistaken for imagination, or the confusion of true memories with false memories.

Consistency bias
Incorrectly remembering one's past attitudes and behavior as resembling present attitudes and behavior.

Rosy retrospection
The tendency to rate past events more positively than they had actually rated them when the event occurred.

Self-serving bias
Perceiving oneself responsible for desirable outcomes but not responsible for undesirable ones.

Egocentric bias
Recalling the past in a self-serving manner, e.g., remembering one's exam grades as being better than they were, or remembering a caught fish as being bigger than it was.

Hindsight bias
Filtering memory of past events through present knowledge, so that those events look more predictable than they actually were; also known as the 'I-knew-it-all-along effect.'
Negativity bias
Phenomenon by which humans pay more attention to negative than positive experiences or other kinds of information.

Interloper effect
The tendency to value third party consultation as objective, confirming, and without motive. Also consultation paradox, the conclusion that solutions proposed by existing personnel within an organization are less likely to receive support than those recruited for the purpose.

Normalcy bias
The refusal to plan for, or react to, a disaster which has never happened before.

Neglect of probability
The tendency to completely disregard probability when making a decision under uncertainty.

Hyperbolic discounting
The tendency for people to have a stronger preference for more immediate payoffs relative to later payoffs, where the tendency increases the closer to the present both payoffs are.

Irrational escalation
The tendency to make irrational decisions based upon rational actions already taken.

Omission bias
The tendency to judge harmful actions as worse, or less moral, than equally harmful omissions.

Mere exposure effect
The tendency for people to express undaunted liking for things merely because they are familiar with them.
Distinction bias
The tendency to view two options as more dissimilar when evaluating them simultaneously than when evaluating them separately.

Contrast effect
The enhancement or diminishing of a weight or other measurement when compared with a recently observed contrasting object.

Bandwagon effect
The tendency to do (or believe) things because many other people do (or believe) the same. Related to groupthink and herd behavior.

Denomination effect
The tendency to spend more money when it is denominated in small amounts (e.g., coins) rather than large amounts (e.g., bills).

Confirmation bias
The tendency to search for or interpret information in a way that confirms one's preconceptions.

Choice-supportive bias
The tendency to remember one's choices as better than they actually were.

Endowment effect
The fact that people often demand much more to give up an object than they would be willing to pay to acquire it.

Congruence bias
The tendency to test hypotheses exclusively through direct testing, in contrast to tests of possible alternative hypotheses.
**Positive outcome bias**
The tendency to overestimate the probability of good things happening to them (see also wishful thinking, optimism bias, and valence effect).

**Telescoping effect**
The effect that recent events appear to have occurred more remotely and remote events appear to have occurred more recently.

**Survivorship bias**
The tendency to concentrate on the people or things that "survived" some process and ignoring those that didn't, or arguing that a strategy is effective given the winners, while ignoring the large amount of losers.

**Selection bias**
A distortion of evidence or data that arises from the way that the data are collected.

**Texas sharpshooter fallacy**
The fallacy of selecting or adjusting a hypothesis after the data is collected, making it impossible to test the hypothesis fairly. Refers to the concept of firing shots at a barn door, drawing a circle around the best group, and declaring that to be the target.

**Pareidolia**
A vague and random stimulus (often an image or sound) is perceived as significant, e.g., seeing images of animals or faces in clouds, the man in the moon, and hearing hidden messages on records played in reverse.

**Outcome bias**
The tendency to judge a decision by its eventual outcome instead of based on the quality of the decision at the time it was made.

**Disregard of regression toward the mean**
The tendency to expect extreme performance to continue.
35* probability / belief biases

Gambler's fallacy
The tendency to think that future probabilities are altered by past events, even though they are actually unchanged. Results from an erroneous conceptualization of the Law of Large Numbers. For example, "I've flipped heads with this coin five times consecutively, so the sixth flip is much greater than heads."

Clustering illusion
The tendency to see patterns where actually none exist. Glouch: "OXXX OXXX OXXX OXXX OXXX"

Illusory correlation
Beliefs that inaccurately suppose a relationship between a certain type of action and an effect.

Last illusion
The belief that someone must know what's going on.

Overconfidence effect
Excessive confidence in one's own answers to questions. For example, people rate 99% correct answers as 95% confident, but only 65% correct answers as 60% confident.

Hindsight bias
"I-knew-it-all-along" effect, the tendency to see past events as predictable.

Observer-expectancy effect
When a researcher expects a given result, they are unconsciously more likely to misinterpret or misinterpret data in order to find it (see also subject-expectancy effect).

Hawthorne effect
The tendency to perform or perceive differently when one knows they are being observed.
Availability heuristic
Estimating what is more likely by what is more available in memory, which is biased toward vivid, unusual, or emotionally charged examples.

Belief bias
An effect where someone's evaluation of the logical strength of an argument is biased by the believability of the conclusion.

Ostrich effect
Ignoring an obvious (negative) situation.

Attentional bias
The tendency to neglect relevant data when making judgments of a correlation or association.

Disposition effect
The tendency to sell assets that have increased in value but hold assets that have decreased in value.

Availability cascade
A self-reinforcing process in which a collective belief gains more and more plausibility through its increasing repetition in public discourse (or “repeat something long enough and it will become true”).

Conjunction fallacy
The tendency to assume that specific conditions are more probable than general ones.

Ambiguity effect
The tendency to avoid options for which missing information makes the probability seem "unknown".

Capability bias
The tendency to believe that the closer average performance is to a target, the tighter the distribution of the data set.

Authority bias
The tendency to value an ambiguous stimulus (e.g., an art performance) according to the opinion of someone who is seen as an authority on the topic.

*number* listed here is not an academic fact, it is simply listed to aid the memorization process.
35° probability / belief biases

- **Stereotyping**
  Expecting a member of a group to have certain characteristics without having actual information about that individual.

- **Subjective validation**
  Perception that something is true if a subject's belief demands it to be true. Also assigns perceived connections between coincidences.

- **Subadditivity effect**
  The tendency to judge probability of the whole to be less than the sum of the probabilities of the parts.

- **Well-travelled road effect**
  Underestimation of the duration taken to traverse familiar routes and overestimation of the duration taken to traverse less familiar routes.

- **Anchoring effect**
  The tendency to rely too heavily or exclusively on a past reference or one trait or piece of information when making decisions (also called "sufficient adjustment").
This document will be updated periodically as the Wiki improves. Thank you for your interest!