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Subject: Code of Conduct

Division: C

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Assignment No. 1

Group discussion on one practice in the family/home that everyone has to follow. For example, not wearing footwear in the house, taking a bath first thing in the morning, seeking blessings from elders, etc. Connect this Code of Conduct in them to one that exists in the professional world. Make a report on it.

Group Activity

Group Members:

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What is Code of Conduct in a Family?

All lasting collective communities, including families and organisations, have clearly defined, accepted sets of behaviours that their members have to strictly adhere to. Such codes help avoid deviations from the norms, and build smooth relationships. Codes of conduct also help build organisational systems and practices; assumptions give way to predictability and stability. For example, a family code might include some of the following:

1. Complete the job.
2. Do the right thing.
3. Believe the best about each other.
4. Family first.
5. Be generous.

6. Listen well. Ask questions.
7. Serve one another.
8. Communicate with gentleness.
9. Be honest and direct.
10. Don't gossip.

One of the most important practices that should be executed at home by all the members of the family, according to us is expressing one's emotions with effective communication.

Emotions are part of our everyday lives. Sometimes, it can feel like our feelings control how we think and act to the point where we feel like we're not in control. Experiencing and expressing emotions are integral parts of life. Emotions and the ability to express emotions give us the ability to connect deeper with ourselves, thereby improving communication and relationships with others. We are born to feel a range of emotions, from sadness, anger, joy, happiness and fear. Stopping this natural and healthy process can lead to negative and unhealthy consequences. Just like we are naturally born to feel. Holding or stopping your breath, leads to death, stuffing and numbing your emotions creates unhappiness, stress and other life threatening illness and diseases.

Benefits of Expressing Emotions

Learning how to express emotions in a healthy way has some benefits:

- Improves the ability to connect with self and others leading to healthier and happier relationships, weather be it on private or professional front.
- Improves decision making and ability to solve problems.
- Increases resilience.
- Reduces stress.
- Reduces anxiety.
- Improves confidence.

- Reduces depressive symptoms.

Expressing Emotions in One's Family

There's nothing like family. The people we're related to by blood and marriage are expected to be our closest allies, our greatest sources of love and support. Too often, however, our interactions with family are filled with misunderstanding and resentment, bickering and badgering. Those we should know and be known by best, end up feeling like adversaries or strangers.

Family is where our first and strongest emotional memories are made, and that's where they keep appearing. And this is why expressing emotions with effective communication succeeds where other efforts at family harmony fails. Active awareness and empathy—the ability to be aware, accepting, and permanently attuned to ourselves and others—tells us how to respond to one another's needs.

Expression is incredibly powerful in the family because it puts you in control of your relationships with parents and children, siblings, in-laws and extended family. When you know how you feel, you can't be manipulated by other's emotions; nor can you blame family conflict on everyone else. Most of the techniques for improving family relationships are therefore centred on communicating your feelings to those you care about, as close relationships are centred around feeling.

Without this emotional intimacy, family contact becomes a burden, because no one is comfortable spending that much time with a stranger. If you want your family members to know and accept each other lovingly, you have to begin with your own emotional honesty and openness.

How Expressing Emotions at Workplace can be Beneficial

Expressing emotions in the workplace begins from the inside out with each individual. It involves recognizing various aspects of your feelings and emotions and

taking the time to work on the elements of self-awareness, self-regulation, motivation, empathy and social skills.

New research from Wharton management professor Michael Parke highlights the benefits of expressing emotions in the workplace. This creates a supportive environment which can increase the ability of team members to solve problems, elaborate information and create ideas.

There is a great benefit in expressing emotions in the workplace. When teams have supportive environments where members share their feelings *and* empathetically respond to each other, they can increase their ability to solve problems, elaborate information, and generate ideas. Therefore, sharing emotions has the overall effect of enhancing workplace creativity.

Assignment No. 2

Observe a short video from the given link

<https://www.youtube.com/watch?v=5KZx81crb48> that shows

unethical behaviour can be played and give your opinion about the situation. Write down about the levels of moral behaviour based on Kohlber's theory and Gilligan's theory. Make a report on it.

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Engineering is the process of developing an efficient mechanism which quickens and eases the work using limited resources, with the help of technology. Ethics are the principles accepted by the society, which also equate to the moral standards of human beings. An engineer with ethics, can help the society in a better way.

Hence the study of engineering ethics, where such ethics are implemented in engineering by the engineers, is necessary for the good of the society. Engineering Ethics is the study of decisions, policies and values that are morally desirable in engineering practice and research.

The video tells us of an incident that took place in the Kansas City Hyatt-Regency collapse. In July of 1980s, the Hyatt Regency Hotel in Kansas City, Missouri was showing off its new multi-story atrium, decked out with two levels of suspended walkways. These walkways were supported by beams, which were supposed to be held up by long rods hanging from the ceiling. To even the load and reduce the stress on each beam, the walkways were supposed to have a single rod extending all the way through them. But something happened between the initial design stage and the actual building of the atrium. When the builders had some difficulty putting it together, the system was modified to have two separate, shorter rods instead of a single longer one. This design change meant that the upper rod had to not only support the weight of the walkway that it held up, but also the one below it, essentially doubling the load.

During a party about a year after the atrium opened, these beams failed and the two walkways collapsed, killing 114 people and injuring 216 people. In terms of lost lives,

it was one of the most devastating structural failures in the U.S. history. A lot went wrong, much of it caused by poor oversight and bad communication. A formal review of the changed design never happened, strength calculations were never performed, work was subcontracted out and the engineer on record put their seal on the design without personally checking everything. It all could have been prevented if only they'd followed the engineer's Code of Ethics.

Kohlberg's Theory

Kohlberg's theory of moral development is a theory that focuses on how children develop morality and moral reasoning. Kohlberg's theory suggests that moral development occurs in a series of three stages; each stage is divided into two sub-stages. The theory also suggests that moral logic is primarily focused on seeking and maintaining justice.

1. Preconventional Morality: It is the earliest period of moral development. It lasts until around the age of 9. At this age, children's decisions are primarily shaped by the expectations of adults and the consequences for breaking the rules. There are two stages within this level:

- **Stage 1 (Obedience and Punishment):** The earliest stages of moral development, obedience and punishment are especially common in young children, but adults are also capable of expressing this type of reasoning. According to Kohlberg, people at this stage see rules as fixed and absolute. Obeying the rules is important because it is a way to avoid punishment.
- **Stage 2 (Individualism and Exchange):** At the individualism and exchange stage of moral development, children account for individual points of view and judge actions based on how they serve individual needs. In the Heinz dilemma, children argued that the best course of action was the choice that best served Heinz's needs. Reciprocity is possible at this point in moral development, but only if it serves one's own interests.

2. Conventional Morality: The next period of moral development is marked by the acceptance of social rules regarding what is good and moral. During this time, adolescents and adults internalize the moral standards they have learned from their role models and from society. This period also focuses on the acceptance of authority and conforming to the norms of the group. There are two stages at this level of morality:

- **Stage 3 (Developing Good Interpersonal Relationships):** Often referred to as the "good boy-good girl" orientation, this stage of the interpersonal relationship of moral development is focused on living up to social expectations and roles. There is an emphasis on conformity, being "nice," and consideration of how choices influence relationships.
- **Stage 4 (Maintaining Social Order):** This stage is focused on ensuring that social order is maintained. At this stage of moral development, people begin to consider society as a whole when making judgments. The focus is on maintaining law and order by following the rules, doing one's duty, and respecting authority.

3. Postconventional Morality: At this level of moral development, people develop an understanding of abstract principles of morality. The two stages at this level are:

- **Stage 5 (Social Contract and Individual Rights):** The ideas of a social contract and individual rights cause people in the next stage to begin to account for the differing values, opinions, and beliefs of other people. Rules of law are important for maintaining a society, but members of the society should agree upon these standards.
- **Stage 6 (Universal Principles):** Kohlberg's final level of moral reasoning is based on universal ethical principles and abstract reasoning. At this stage, people follow these internalized principles of justice, even if they conflict with laws and rules.

Gilligan's Theory

Gilligan's theory of moral development uses the same basic three-level outline as Kohlberg's along with two transitions between the levels. The levels and transitions are outlined below.

1.Preconventional Morality: At the Preconventional Level, moral judgment is entirely focused on the self and the need to survive. When a conflict arises between the needs of the self and the needs of others, a woman will choose to address her own needs.

- **Transition 1:** During the first transition from the Preconventional to the Conventional Level, the woman realizes that she has a responsibility to others. It is the first time that she realizes her previous moral perspective could be characterized as selfish.

2.Conventional Morality: At the Conventional Level, moral judgment becomes concentrated on caring for others. The woman starts to see herself as a participant in society whose claim to being a good citizen relies on helping and protecting others. This concern for others overrides her concern for herself, leading to a morality focused on self-sacrifice.

- **Transition 2:** During the second transition from the Conventional to the Postconventional Level, the woman starts to experience tension between the needs of others and the needs of the self. She begins to realize she must strike a better balance between her needs and the needs of others. This leads to a shift in moral judgment away from "goodness" to "truth" as she starts to honestly assess her own desires, not just her responsibility to others.

3.Postconventional Morality: At the Postconventional Level, moral judgment is dictated by the principle of nonviolence. The needs of the self are just as important as the needs of others, which causes the woman to arrive at a universal ethic of care and

concern. Adhering to the obligation of care while avoiding harm or exploitation to herself and others enables the woman to accept responsibility for her choices.

Assignment No. 3

Write a 200-word essay on importance of professional ideals like conflict management, ambition, ethical manners and accountability of being a good professional. Make a report on it.

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Conflict management goes a long way in strengthening the bond among the employees and half of the problems automatically disappear. Individuals must feel motivated at work and find every single day exciting and challenging. Before implementing any idea, it must be discussed with everyone and no one should ever feel ignored or left out. This way, every employee feels indispensable for the office and he strives hard to live up to the expectations of his fellow workers and in a way contributing to the organization in his best possible way. Conflict management avoids conflicts to a great extent and thus also reduces the stress and tensions of the employees. No one likes to carry his tensions back home and if you fight with your colleagues and other people, you are bound to feel uncomfortable and restless even at home.

Conflict management helps to find a middle way, an alternative to any problem and successful implementation of the idea. Problems must be addressed at the right time to prevent conflict and its adverse effects at a later stage. Through conflict management skills, an individual explores all the possible reasons to worry which might later lead to a big problem and tries to resolve it as soon as possible.

Ambition in the workplace can lead workers to adopt a hurried pace, which can hurt company morale, productivity and your bottom line. Workers should not give in to the pressure of making more decisions per hour than their skills or talents allow. Instead, employees should focus on work flow and process improvement, rather than being the first to complete an important work assignment. Overly ambitious workers are more likely to feel pressured to perform in ways that could compromise their

integrity. If ambition is getting in the way of performance, offer your workers additional training on how to adopt a slower, more efficient pace.

Ethics in the workplace is defined as the moral code that guides the behaviour of employees with respect to what is right and wrong in regard to conduct and decision making. Ethical decision making in the workplace takes into account the individual employee's best interest and also takes into account the best interest of those impacted. The latter of the definition is often where individual employees struggle to act ethically. Furthermore, ethical behaviour doesn't only apply to individual employees, the organization itself should exemplify standards of ethical conduct.

Ethics in the workplace should be a core value of any organization. Aside from doing the right thing, conducting ourselves ethically has great rewards and returns. Being ethical is essential to fixing problems and improving processes. It is needed to establish baseline measures and increase efficiencies. Most importantly, it is essential to having strong working relationships with people. On the other hand, covering up our unethical behaviour does the opposite. Obfuscating and hiding from our failings impedes our ability to grow as leaders, as workers, and as people. It also ensures that our co-workers won't trust us.

Accountability at work refers to the idea that every employee should take ownership of the work they have given. This means you should do what's best for the business. An employee who is accountable will always take responsibility for her or his actions and their outcomes. The employee will not think of this as a responsibility of their management.

Accountability is a crucial part of efficiency in the workplace. If employees are held accountable for their lack of punctuality and their lazy and irresponsible behaviour, it helps ensure that efficiency is also maximised and complements the efforts of other disciplined employees.

Assignment No. 4

Write down the case study on Professional ethics on the any of topics. Make a report on it.

1. Nestle potheyrs on with a rural revamp and innovation.
2. Sustainable Packaging Practices at The Better Packaging Co.
3. Facebook Inc.: Navigating Data Privacy?
4. ReFed-Sorting the Food Waste
5. Building a Sustainable Company: The Story of Eileen Fisher

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Nestle powers on with a rural revamp and innovation:

Nestlé has always been associated with the urban market, and young city dwellers in India too typically take a liking to its product portfolio in India. After the Maggi fiasco in 2015, Nestlé wanted to reduce its dependence on a few products and widen its reach. Nestlé India Ltd (NIL) launched nearly 35 products within a span of just six months in 2016. At that time, it had a presence in just 6,000 villages across the country.

Fierce competition:

Nestlé is a late entrant. Hindustan Unilever Ltd (HUL) was one of the first in India to develop a strong rural distribution network in the 1940s and gain a wide reach. Later, in the 1990s, HUL expanded its distribution network through Project Shakti, which helped women become entrepreneurs by selling HUL goods. The project helped HUL cover almost 50 per cent of all the 6,00,000+ Indian villages.

Initially, Nestlé's focus was on tier 1 and tier 2 cities from where it was witnessing high demand. It then expanded its focus to smaller towns with 10,000 to 15,000 people. To improve reach, the company started researching customers' needs and shopping habits in different geographies. This helped the company to come up with strategies specific to each market and tailor its products accordingly.

Product diversification:

Nestlé had always relied on a few flagship products, such as Maggi and Nescafé. Once it started catering to rural markets, it started putting out tailor-made products in different packages. Between 2016 and 2018, Nestlé launched 39 new products. These included Masala Fusion dairy whitener, Greek Yogurt Grekeyo, and Nestlé Everyday Chai in three varieties.

It launched Nestlé a+ Banglar Misthi Dai, and Ceregrow organic cereals, Lactgrow for toddlers, and products in the weight management category like OPTIFAST. Under the Maggi range, it launched new variants of sauces, soups, pasta, and *poha*. New flavours of Maggi — Yummy Capsica and Chatpata Tomato — were launched along with atta spinach noodles. To cater to growing demand from towns and tier 2 and tier 3 cities, Nestlé launched Maggi fried rice masala, Paneer masala mix, and Nestlé Ceremeal Daliya.

Challenges:

During the Covid-19 pandemic, growth in the urban areas tanked, but the rural markets showed accelerated growth. In the quarter ending December 2020, while Nestlé's overall sales grew by 10 per cent, urban sales grew by just 6 per cent. Narayanan was of the view that the main reason for the falling demand from urban markets was the reverse migration that took place in the wake of the lockdown imposed to prevent the spread of the virus.

At the same time, semi-urban and rural India were experiencing growth. For example, Maggi had found several takers in rural markets, pushed by advertisements in local languages and smaller packs priced at ₹5.

Analysis:

India has the world's largest rural population. According to the 2011 census, rural markets comprise more than 6,40,000 villages with 850 million people. Despite increasing urbanisation, over half of India's population still lives in the rural areas. Around 15 per cent of the rural population lived in poverty as of 2020. The average size of the rural household is 4.7. The rural FMCG market in India accounts for 40 per cent of the overall FMCG market in India.

The people in villages account for half of the country's GDP and their consumption patterns are changing gradually. They demand high-quality products, just like their urban counterparts. The consumer goods market in India's rural areas, which stood at \$12 billion in 2019, is expected to rise to \$100 billion by 2025.

Availability:

India has over six lakh villages, spread out across the country. Over a quarter of these villages are not connected through all-weather roads. It is important for FMCG companies to make their products available in the hinterland if they want to take advantage of the demand there. The last-mile distribution is, however, a challenge in India. FMCG major HUL addressed it through its 'Project Shakti'. Nestlé is available in nearly 90,000 villages, which still left a lot of villages uncovered.

Awareness:

While literacy levels are lower in rural areas than in urban areas, growing internet adoption has made it easy to reach people and create awareness. At the same time, marketers may find it difficult to cater to the rural population as most of the advertisements in the country are urban-centric. The fact that languages and dialects change every few miles makes it important for FMCG companies like Nestlé to come up with specific programs for the rural population.

Assignment No. 6

Write a group Assignment on given topic based on unethical treatment. (Group size - 4 students). One specific case where they felt unethical treatment has been meted out to a person by an engineer – either as a witness, adviser, dishonesty, improper skills testimony, etc. The group has to make a short presentation on it. Make a report on it.

Group Activity

Group Members:

Brian Thomas - SCOC04

Atharva Morankar - SCOC08

Sanika Deshmukh - SCOC10

Shruti Gharate - SCOC12

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The Space Shuttle Challenger Disaster

Space Shuttle Challenger was a Space Shuttle orbiter manufactured by Rockwell International and operated by NASA. Named after the commanding ship of a nineteenth-century scientific expedition that travelled the world, Challenger was the second Space Shuttle orbiter to fly into space after Columbia, and launched on its maiden flight in April 1983.

It was destroyed in January 1986 soon after launch in an accident that killed all seven crewmembers aboard. Initially manufactured as a test article not intended for spaceflight, it was utilized for ground testing of the Space Shuttle orbiter's structural design. However, after NASA found that their original plan to upgrade Enterprise for spaceflight would be more expensive than upgrading Challenger, the orbiter was pressed into operational service in the Space Shuttle program.

STS-51-L was the orbiter's tenth and final flight, initially planned to launch on January 26, 1986 (after several technical and paperwork delays). Challenger blasted off at 11:38 am EST on January 28, 1986. Just over a minute into the flight, the faulty booster joint opened up, leading to a flame that melted securing struts which resulted in a catastrophic structural failure and explosion of the External Tank. The resulting pressure waves and aerodynamic forces destroyed the orbiter, resulting in the loss of all the crew. This mission attracted huge media attention, as one of the crew was a civilian schoolteacher - Christa McAuliffe, who was assigned to carry out live lessons from the orbiter (as part of NASA's Teacher in Space Project). Other members would deploy the TDRS-B satellite and conduct comet observations.

In March 1988 the federal government and Morton Thiokol Inc. agreed to pay \$7.7 million in cash and annuities to the families of four of the seven Challenger astronauts as part of a settlement aimed at avoiding lawsuits in the nation's worst space disaster, according to government documents. The documents show that Morton Thiokol, which manufactured the faulty solid rocket boosters was blamed for the accident, paid 60 percent, or \$4,641,000. The remainder, \$3,094,000, was paid by the government.

In September 1988 a federal judge dismissed two lawsuits seeking \$3 billion from Space Shuttle rocket-maker Morton Thiokol Inc. by Roger Boisjoly, a former company engineer who warned against the ill-fated 1986 *Challenger* launch.

According to Roger Boisjoly, The SRM [Solid Rocket Motor] Program at MTI [Morton Thiokol, Incorporated] was suffering from the lack of proper original development work and some may argue that sufficient funds or schedule were not available and that may be so, but MTI contracted for that condition. The Shuttle program was declared operational by NASA after the fourth flight, but the technical problems in producing and maintaining the reusable boosters were escalating rapidly as the program matured, instead of decreasing as one would normally expect. Many opportunities were available to structure the work force for corrective action, but the MTI Management style would not let anything compete or interfere with the production and shipping of boosters. The result was a program which gave the

appearance of being controlled while actually collapsing from within due to excessive technical and manufacturing problems as time increased.

Here's a presentation on the Space Shuttle Challenger

THIRD CASE IN POINT: SHUTTLE CHALLENGER

What SHOULD happen:

- SPACE SHUTTLE DISCOVERY at STS-120 Launch



What DID happen:

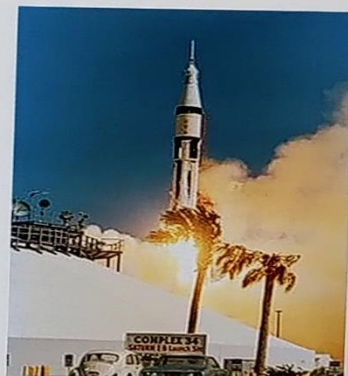
- SPACE SHUTTLE CHALLENGER at SPS-25 Launch Jan 28, 1986



BACKGROUND: Space Shuttle Program Overview

- Vehicle Architecture: Shuttle's "Stages In Parallel" architecture was a substantial departure from Apollo and Mercury "Stages In Series" architecture.
- Re-Usable Orbiter objective made Crew Capsule Jettison feature of Apollo and Mercury programs more difficult than before.
- NASA Decision: NO CREW CAPSULE ESCAPE SYSTEM FOR SHUTTLE

APOLLO flight vehicle



BACKGROUND Space Shuttle Program Overview cont'd.

- **Funding Strategy:** Seek Congressional approval by earmarking at least one component supplier contract for each US Senatorial and Rep District in the country.
- Delaware got space suits, Wisconsin got SRM steel cases, Minnesota got phenolic resin impregnated carbon cloth, Virginia got rayon for white woven cloth (carbon cloth precursor), Nevada got ammonium perchlorate oxidizer for solid propellant, etc.
- **Congressional direction to NASA:** YOU TELL US that revenue from commercial flights will cover the program development costs.
 - Interpretation: "You tell us" more important than whether or not it's true.
 - Responses: 1) Flight schedule large enough to recover program development costs; 2) Intense program-long focus on costs.
- **Original launch schedule** built from "modest" start to SIXTY flights/year; peak launch rates actually achieved: 9 in 1985 and 8 in 1997.
- **All ground support systems designed AND BUILT** to support 60 flights/year schedule.

SUBTLE DEMONSTRATION OF NASA "SHOP CULTURE"

- Projected 60 flights per year schedule is one flight every six days.
- Time in orbital flight much longer than time during ascent.
- Potential for damage by collision with space junk (natural or otherwise) during ascent or orbital flight, precluding normal return, should be among design considerations.
- Obvious solution: Standing policy NOT to fly Flight "X" until Flight "X + 1" is within six days of flight-ready.
- No such policy was in effect when the Shuttle Columbia failed re-entry (2/2003).
- After Columbia, it was implemented for only one of the several additional flights.
- Credible reason: In the year such a policy becomes effective, implementation requires paying for one more total vehicle build-up than the number of flights.
- Cost impact first year, no impact thereafter.
- **MANAGEMENT DECISION:** Do it NEXT year. Cost out-ranks safety.

CLEVIS JOINT CROSS SECTION (schematic)

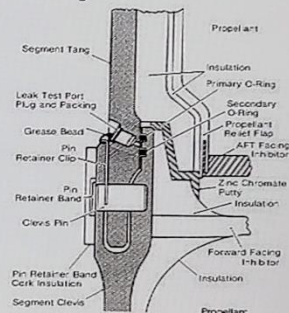
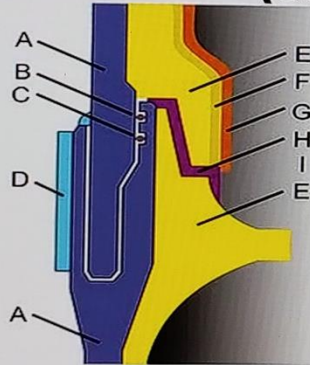


Figure 14
Solid Rocket Motor cross section shows positions of tang, clevis and O-rings. Putty lines the joint on the side toward the propellant.

A - steel wall thickness 12.7 mm, B - Primary O-ring, C - Backup O-ring, D - Cork cover band, E - insulation, F - insulation, G - carpeting, H - sealing paste, I - propellant

IMPLICATIONS OF SPACE SHUTTLE SRM SERVICE TEMPERATURE

- NASA specification: demonstrate capability to operate between +40 degF and +90 degF.
 - SRM Thermal mass judged sufficient to bridge excursions higher or lower.
 - Lowest temp full scale demo, at +53 degF, showed primary O-ring blow-by.
 - Effect of adjacent orange tank for cryogenic fuel and oxidizer unrecognized.
 - Orange tank caused convection; SRM case temp was often below +40 degF
- SRM clevis joint was originally proportioned to INCREASE O-ring squeeze with rising pressure.
- After case fab was well under way, NASA initiated weight reduction to increase payload by reducing SRM case cylinder thickness between clevis joints. This changed clevis joint behavior, DECREASING O-ring squeeze with rising pressure.
- O-ring (artificial rubber) stiffens with decreasing temp,
- Squeeze loss during pressurization prompted intense experimental inquiry into O-ring material behavior: Would prior squeeze relax fast enough to maintain seal during ignition pressurization and thereafter.
- Result: Yes (on paper) at +40 degF and higher, but 53 degF was lowest actual fully credible verification from an early 1985 flight.

PRE-LAUNCH ACTIVITY AT THE CAPE

- Evening before launch, at Readiness Review Meeting, anticipated weather for 1/28/1986: 29 degF at 9 am, 38 degF at 2 pm (without convection effect)
- MTI lead on-site rep presented charts leading to first (engineering) recommendation: "O-Ring temp must be 53 degF (or greater) at launch."
- NASA on-site reps asked for and got MTI higher management telecom concurrence. After off-line conference, top management in Utah withdrew earlier objection.
- Launch day morning observations: **ICE EVERYWHERE !!**
 - Local ambient air temp +26 degF
 - ICICLES HANGING FROM AFT SEGMENT STIFFENING RINGS !!
 - Hand-Held Infrared Pyrometer measurements on one of steel cases: near aft field joint: +9 degF, on aft skirt +7 degF
 - Ice Team informed Mission Management Team soon after 9 am.
 - No MMT discussion because measurements were for Engineering Information only, not part of formal Launch Commit Criteria
 - Ice Team 10:30 am inspection disclosed ice still on one of the SRB's
 - Houston Mission Control reported that trajectory analysis of ice falling from orange tank during flight would not impact orbiter
- Launch was at 11:38 am

Failure on the Pad



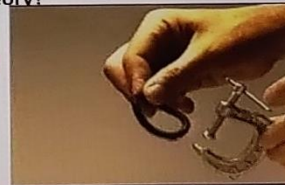
THE GREEN BALL THEORY

(title of Chapter 26 in "Truth, Lies and O-Rings: Inside the Space Shuttle Challenger Disaster" Allan J. McDonald with James R Hanson)

- **Conversation, Al McDonald and Richard Feynman, physicist, Nobel Prize winner, Rogers Commission member, at impromptu May 1986 lunch: Summary of 13 pages of text:**

- Feynman: Why did Morton Thiokol (MTI) management change their minds after their initial recommendation not to launch?
- McDonald: Because of the Green Ball Theory.
- Feynman: What's the Green Ball Theory?
- McDonald: Management considerations: No signed contract for the next SRM buy; and NASA announced intent to seek a second source for SRM's.
- Feynman: So what does that have to do with a Green Ball Theory?
- McDonald: another gre
- Feynman:
- McDonald:

CENSORED



Assignment No. 7

Watch the movies like The Social Network, Steve Jobs, Moneyball, Jobs, etc. Make a report about collegiality, intellectual property, friendship and professional relationships based on the movie.

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After watching the movie Moneyball the basic idea that I got out of it was that, “Any unconventional idea, no matter how good it is, could face rejections initially.”

Moneyball is a sports movie based on Michael Lewis’s book: ‘Moneyball: The Art of Winning an Unfair Game’. In this movie, Billy Beane, General Manager at Oakland Athletics baseball team, faced with a limited budget, assembled a competitive team of undervalued talent with the help of Peter Brand, a young Yale economics graduate harbouring radical idea.

At the end, Oakland Athletics, the team that finished the previous season with the worst record in Major League Baseball, sets a new American League record by winning 20 consecutive games in 103 years’ history of American League baseball and that too with one of the lowest budgets in the league. This movie covers many important lessons. A few of them are as follows:

I. Listening Opens New Possibilities

Though oration is a more visible and talked about leadership quality, listening is also a very important leadership quality and sometimes ignored by many people. Billy Beane listened to Peter Brand, who had just started his professional career. Billy understood Peter’s point of view on baseball, misjudgement of players and mismanagement of teams. Billy found an unconventional way of looking at the game through Peter’s radical thought - People who run ball clubs, they think in terms of buying players. Your goal shouldn't be to buy players. Your goal should be to buy wins. And in order to buy wins, you need to buy runs.

II. Understand the Gap Between Perception & Reality

Oakland scouts had their own perceptions about various players. But Peter shared a new perspective with Billy that people are overlooked for a variety of biased reasons and perceived flaws such as age, appearance, personality. He showed a realistic way to identify good players through mathematics rather than perceptions.

III. Seek Criticism to Understand Reality

Billy had been a Major League player before becoming General Manager. Scouts considered Billy a potential baseball superstar, who had skills to hit, run, field, throw and hit with power, and gave him a lucrative financial offer. Billy chose baseball over a full scholarship from Stanford University, but his career in the Major Leagues was disappointing. When asked by Billy, Peter admitted that he would not have drafted Billy until the ninth round instead of first round and Billy should have chosen college over baseball. This opinion of Peter about Billy was different from experienced scouts who identified Billy as a promising player.

IV. Simplify Complexity

Peter worked on complexity part of analysing players and wrote an algorithm to build year on year projection. It had all the intelligence needed to project players. This complex algorithm simplified things for Billy so that he could choose players based on one number and find value in players that nobody else can see. Rather than relying on the scouts' experience and intuition, Billy selected players based almost exclusively on their on-base percentage (OBP).

V. Be Responsive to Change

Scout Grady Fuson aggressively confronted Billy Beane. He was unhappy because Billy was discounting Grady's intuition and 29 years of experience and giving value to an unconventional methodology of a college graduate – Peter. Billy mentioned 'Adapt or Die' and at the end of the discussion, Grady was fired as he was not ready to adapt to the new approach required in the circumstances.

VI. Be Ready for Rejections

Any unconventional idea, no matter how good it is, could face rejections initially. Oakland scouts were first dismissive and then hostile towards Peter Brand's non-traditional sabermetric approach to scouting players. Early in the season, the Athletics played poorly, leading critics to dismiss the new method as a failure. Additionally, Billy faced continuous resistance from Art Howe, Oakland Athletics manager.

VII. Focus on Winning the Last Game, Not Making Records

Though his team had 20 consecutive victories, Billy was concerned about winning the series, not just making records. Even after achieving the record of 20 consecutive wins, Oakland Athletics couldn't win the series. Records or awards are not proxy for continuous winning. There have been many instances when leaders win prestigious awards and later lose to the competition in the business world.

VIII. Always be Ready to Learn & Improve

Billy learned new ways to select players from Peter at the same time Peter learned how to fire players from Billy. Players also took their game analysis feedback by Billy and Peter seriously and understood their development areas. Whenever required, Billy tried different ways to give his feedback for example, when players were celebrating

after losing, he showed his anger and made them realize that's not the right way to act after losing. To one of the senior players David Justice, Billy mentioned - I'm not paying you for the player you used to be. I'm paying you for the player you are right now.

Assignment No. 8

Write down 5 most important codes of conduct that you feel every computer engineer should follow. Refer some business organization websites for the same. Make a report on it.

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Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behaviour that requires adherence to the highest principles of ethical conduct.

- 1) Engineers shall be guided in all their relations by the highest standards of honesty and integrity.

Engineers shall acknowledge their errors and shall not distort or alter the facts.

Engineers shall advise their clients or employers when they believe a project will not be successful.

Engineers shall not accept outside employment to the detriment of their regular work or interest. Before accepting any outside engineering employment, they will notify their employers.

Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.

- 2) Engineers shall at all times strive to serve the public interest.

Engineers are encouraged to participate in civic affairs; career guidance for youths; and work for the advancement of the safety, health, and well-being of their community.

Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.

Engineers are encouraged to extend public knowledge and appreciation of engineering and its achievements.

Engineers are encouraged to adhere to the principles of sustainable development in order to protect the environment for future generations.

- 3) Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or by other improper or questionable methods.

Engineers shall not request, propose, or accept a commission on a contingent basis under circumstances in which their judgment may be compromised.

Engineers in salaried positions shall accept part-time engineering work only to the extent consistent with policies of the employer and in accordance with ethical considerations.

Engineers shall not, without consent, use equipment, supplies, laboratory, or office facilities of an employer to carry on outside private practice.

- 4) Engineers shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of other engineers. Engineers who believe others are guilty of unethical or illegal practice shall present such information to the proper authority for action.

Engineers in private practice shall not review the work of another engineer for the same client, except with the knowledge of such engineer, or unless the connection of such engineer with the work has been terminated.

Engineers in governmental, industrial, or educational employ are entitled to review and evaluate the work of other engineers when so required by their employment duties.

Engineers in sales or industrial employ are entitled to make engineering comparisons of represented products with products of other suppliers.

- 5) Engineers shall give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.

Engineers shall, whenever possible, name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.

Engineers using designs supplied by a client recognize that the designs remain the property of the client and may not be duplicated by the engineer for others without express permission.

Engineers, before undertaking work for others in connection with which the engineer may make improvements, plans, designs, inventions, or other records that may justify copyrights or patents, should enter into a positive agreement regarding ownership.

Engineers' designs, data, records, and notes referring exclusively to an employer's work are the employer's property. The employer should indemnify the engineer for use of the information for any purpose other than the original purpose.