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Avoiding the Pitfalls of the Dunning-Kruger Effect and Groupthink

“... ignorance more frequently begets confidence than does knowledge ...” Charles Darwin, 1871

Why Study Organisational Psychology?

- Organisations are made up of people, and people individually and in groups are prone to behaviours that are self-destructive, or contrary to the purpose of the organisation;
- The “*Dunning-Kruger effect*” was first described in 1999; “*Groupthink*” was first described in 1972;
- History books are replete with examples of both, going back centuries, with catastrophic outcomes;
- *Understanding how and why the Dunning-Kruger effect and Groupthink arise is the best way not to become yet another case study for academic papers!*

What is the Dunning Kruger Effect? (1)

“The Dunning–Kruger effect is a cognitive bias in which relatively unskilled persons suffer illusory superiority, mistakenly assessing their ability to be much higher than it really is. Dunning and Kruger attributed this bias to a metacognitive inability of the unskilled to recognize their own ineptitude and evaluate their own ability accurately. Their research also suggests corollaries: highly skilled individuals may underestimate their relative competence and may erroneously assume that tasks which are easy for them are also easy for others.” –

[Wikipedia definition of Dunning-Kruger Effect](#)

What is the Dunning Kruger Effect? (2)

- **RationalWiki:** *“people who are too stupid to know how stupid they are”*;
- The Dunning-Kruger Effect is often derided as being a case of *“stating the obvious”*, yet the obvious seems to seldom be actually *“obvious”*;
- Dunning and Kruger quantitatively assessed an effect that has been acknowledged since classical times, many times over - examples:
 1. **Plato’s Apology:** *“the wisest people know that they know nothing.”*
 2. **Charles Darwin, 1871:** *“ignorance more frequently begets confidence than does knowledge”*

The Dunning-Kruger Effect vs. Decisions (1)

- **Confidence plays a critical role in making decisions;**
- **Confidence is usually defined as the *objective* or *subjective* measure of certainty in some belief;**
- **An *objective* measure of certainty might be the outcome of an experiment, test or calculation;**
- **A *subjective* measure of certainty is how an individual internally assesses their sense or feeling of certainty on some question;**
- **Most people make most decisions on the basis of subjective measures of certainty, based on their feelings of confidence or lack thereof;**

The Dunning-Kruger Effect vs. Decisions (2)

- **Competent leaders, managers or “decision-makers” will analyse problems and use where possible *objective* measures to establish their confidence in outcomes of decisions;**
- **Such a “decision-maker” will use *subjective* measures only where well calibrated by experience, using experience to build an inner statistical measure of confidence or “*subjective probability*”;**
- **If the “*subjective probability*” is miscalibrated (i.e. wrong), then the individual’s confidence in an outcome will be wrong, and an irrational or wrong decision will result;**

Dunning-Kruger Effect - Confidence

- What Dunning and Kruger showed by experiments is that people who do not understand a problem usually show very high confidence levels in related beliefs that are usually incorrect;
- This is the problem of “*not knowing what you do not know*” – the peculiarity of human psychology is that the less people know, usually the greater their subjective level of confidence in their beliefs, correct or otherwise;
- The “*overconfidence effect*” is a related problem, where people over-estimate the accuracy of their “*subjective probabilities*”;

Dunning-Kruger Effect – Lack of Confidence

- One of the results of the studies by Dunning and Kruger was that individuals who had a good or better understanding of a problem usually had a lower level of confidence in their own understanding or beliefs;
- Burson et al. found that in a number of tasks, both skilled and unskilled did not accurately assess their own potential performance, arguing that *cognitive bias* and *noise* are determining subjective assessments;
- *Conclusion? Studies agree that skilled people do not accurately self-assess, studies disagree on the direction / bias of the errors observed!*

DK Effect – What Does it Teach Us?

- From the perspectives of decision making in both professional practice and management, what Dunning, Kruger and others in the psychology community show is that subjective *judgment* and subjective *confidence* are risky measures when making decisions, important or otherwise;
- Proper understanding, objective analysis and “number crunching” of data using suitable models are always safer ways of reaching a decision;
- *Choosing models for analysis and applying them requires good understanding of their limitations!*
- Proverb: “*A little knowledge can be dangerous*”

Dunning-Kruger Effect – Playing Safe

- If you are dealing with a problem other than one successfully solved many times over, there is a risk that you *“do not know what you do not know”*;
- Subjective *confidence* is NOT a safe indicator of whether the chosen strategy / approach will be successful, or whether you even understand the problem properly;
- *Solution? Assume you do not understand the problem and apply critical thinking and scientific method to solving the problem, experimenting if required along the way to test assumptions and conclusions.*

Dunning-Kruger Effect – Examples

- The annual “Darwin Awards”;
- The “*Policy Based Evidence*” problem, guessing the answer wrongly and looking for evidence *a posteriori* to justify the initial (usually very wrong) guess;
- Many case studies in government and industry of catastrophic decisions made due to a lack of understanding / expertise, resulting high levels of subjective confidence, and a failure to test assumptions and prior beliefs;
- Author’s 1990s email trailer:
“*Envy the ignoramus, for he is never in doubt...*”

Postscript: Plato's Apology

“I am wiser than this man, for neither of us appears to know anything great and good; but he fancies he knows something, although he knows nothing; whereas I, as I do not know anything, so I do not fancy I do. In this trifling particular, then, I appear to be wiser than he, because I do not fancy I know what I do not know.”

What is Groupthink? (1)

“Groupthink is a psychological phenomenon that occurs within a group of people, in which the desire for harmony or conformity in the group results in an irrational or dysfunctional decision-making outcome. Group members try to minimize conflict and reach a consensus decision without critical evaluation of alternative viewpoints, by actively suppressing dissenting viewpoints, and by isolating themselves from outside influences.” -

[Wikipedia definition of Groupthink](#)

What is Groupthink? (2)

Janis: “I use the term groupthink as a quick and easy way to refer to the mode of thinking that persons engage in when concurrence-seeking becomes so dominant in a cohesive ingroup that it tends to override realistic appraisal of alternative courses of action. Groupthink is a term of the same order as the words in the newspeak vocabulary George Orwell used in his dismaying world of 1984. In that context, groupthink takes on an invidious connotation. Exactly such a connotation is intended, since the term refers to a deterioration in mental efficiency, reality testing and moral judgments as a result of group pressures.”

What is Groupthink? (3)

- **Groupthink was first defined by Yale psychologist Irving Janis in a series of 1970s works analysing catastrophic decision failures arising in group decision making activities;**
- **Groupthink remains controversial, with some organisational psychologists and management theorists disputing its existence;**
- **Groupthink does accurately explain many empirically observed problems seen in collective decision activities that result in catastrophic outcomes;**
- **Multiple case studies in the literature.**

Janis: Eight Symptoms of Groupthink (1)

- **Type I: Overestimations of the group — its power and morality:**
 1. Illusions of invulnerability creating excessive optimism and encouraging risk taking.
 2. Unquestioned belief in the morality of the group, causing members to ignore the consequences of their actions.
- **Type II: Closed-mindedness**
 3. Rationalizing warnings that might challenge the group's assumptions.
 4. Stereotyping those who are opposed to the group as weak, evil, biased, spiteful, impotent, or stupid.

Janis: Eight Symptoms of Groupthink (2)

- **Type III: Pressures toward uniformity**
 5. Self-censorship of ideas that deviate from the apparent group consensus.
 6. Illusions of unanimity among group members, silence is viewed as agreement.
 7. Direct pressure to conform placed on any member who questions the group, couched in terms of "disloyalty"
 8. Mindguards— self-appointed members who shield the group from dissenting information.
- **NB Groupthink is not the same as a group sharing a false belief due to a confirmation bias problem, although such a problem may be part of *Groupthink*;**

Janis: Antecedents to Groupthink (1)

- **High group cohesiveness**
 1. deindividuation: group cohesiveness becomes more important than individual freedom of expression
- **Structural faults:**
 2. insulation of the group
 3. lack of impartial leadership
 4. lack of norms requiring methodological procedures
 5. homogeneity of members' social backgrounds and ideology

Janis: Antecedents to Groupthink (2)

- **Situational context:**
 6. highly stressful external threats
 7. recent failures
 8. excessive difficulties on the decision-making task
 9. moral dilemmas
- **Critics of the Groupthink theory often observe that instances attributed to Groupthink do not exhibit all of the symptoms and antecedents to Groupthink, or that other explanations equally well explain the outcomes;**
- **False prior beliefs / shared cognitive biases in group decisions can produce similar outcomes;**

Case Studies of Groupthink (1)

- **Numerous case studies have been produced to justify the Groupthink model:**
 1. Bad political and military decisions;
 2. Bad corporate boardroom decisions;
- **There is ongoing controversy about many of the case studies, and the extent to which the symptoms and antecedents actually applied;**
- **Areas not well studied are the effects of Groupthink in design offices, project offices, and development teams specifying or designing products, especially complicated system level products requiring cross disciplinary teamwork;**

Turner and Pratkanis Model of Groupthink (1)

- Turner and Pratkanis have redefined Groupthink around the SIM model:

“...a social identity maintenance model of groupthink that (a) defines groupthink as a collective attempt to maintain a positive image of the group, (b) identifies conditions under which this form of concurrence seeking is likely to occur, (c) parsimoniously explains the equivocal empirical findings on groupthink, and (d) specifies intervention tactics that can mitigate the detrimental consequences of groupthink for group decision outcomes.”

Turner and Pratkanis Model of Groupthink (2)

“The SIM model is consistent with the view that, as Janis (1982) suggests, one outcome of groupthink seems to be a mutual effort among members of the group to maintain emotional equanimity.

In other words, groupthink can be viewed as a SIM strategy: a collective effort designed to protect the positive image of the group.

Any interventions designed to prevent groupthink must be formulated with an understanding of this motivation for identity protection.”

Turner and Pratkanis Model of Groupthink (3)

“According to the SIM model, the prevention of groupthink is predicated on two overall goals: the stimulation of constructive, intellectual conflict and the reduction of social identity maintenance (see Turner & Pratkanis, 1994, 1997).

Clearly, the stimulation of constructive conflict is a paramount goal of these interventions.

As groupthink arises from the failure to adequately capitalize on controversy, procedures designed to stimulate conflict are unquestionably applicable..”

Turner and Pratkanis Model of Groupthink (4)

*“The social identity maintenance model of groupthink suggests three interventions likely to be capable of diminishing the collective effort directed toward warding off a negative image of the group. These include the provision of **an excuse or face-saving mechanism, the risk technique, and multiple role playing procedures.**”*

- Turner and Pratkanis argue that putting risks above gains, and mandating role-playing of other stakeholders' perspectives in a group are likely measures able to mitigate Groupthink;

Prof Jerry B. Harvey's "Abilene Paradox"

- ***“Organizations frequently take actions in contradiction to what they really want to do and therefore defeat the very purposes they are trying to achieve.”***
- ***“The inability to manage agreement, not the inability to manage conflict, is the essential symptom that defines organizations caught in the web of the Abilene Paradox.”***
- ***“...members fail to accurately communicate their desires and/or beliefs to one another. In fact, they do just the opposite and thereby lead one another into misperceiving the collective reality.”***

Groupthink vs. Dunning Kruger Effect

- Groupthink problems arise when groups place criteria other than decision outcomes ahead of the decision outcome, as Turner and Pratkanis argue, the **reputation of the group**;
- The Dunning Kruger effect arises when unskilled individuals **“do not know what they do not know”**, resulting in inflated confidence levels and catastrophic decisions;
- ***Groups of unskilled individuals with a strong sense of group identity can produce catastrophic decisions due to inflated individual confidence levels, and Groupthink induced failures in critical thinking;***

Postscript: Thatcher on Consensus

“The process of abandoning all beliefs, principles, values, and policies in search of something in which no one believes, but to which no one objects; the process of avoiding the very issues that have to be solved, merely because you cannot get agreement on the way ahead. What great cause would have been fought and won under the banner: ‘I stand for consensus?’ ”

Baroness Margaret Thatcher, LG, OM, PC, FRS

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