

Advances in Project Management Series¹

Decision making under stress - advice for project leaders

By Dr Kaye Remington

At some stage or another in their careers all project leaders are forced to make decisions under conditions of stress. Project management is time dependent. We are governed by schedules, milestones and deliverables. As projects become more complex, with increasing demands from stakeholders, changing markets and technology, we need to consider how effective we are when making decisions under stress.

Stress has an interesting effect on our ability to make good decisions. However stress is not necessarily all bad. The jury is out on exactly how stress affects our decision making capability but research is starting to raise some interesting questions, and there are even a few answers.

The idea that stress might have an effect on judgment has only recently been formally explored. The subject was raised during a Congressional hearing in 1988 during investigations for compensation for the victims of Iran Air Flight 655, which was shot down by the US Navy cruiser Vincennes over the Persian Gulf (Hammond, 2000).

Performance and stress

For over 100 years behavioural scientists have been interested in the subject of arousal (through stress). Many will be familiar with the so-called Yerkes-Dodson principle (1908) which is often incorrectly represented as the simple U-shape published by Hebb in 1955. It suggests that performance increases with arousal to a point of optimal stress and then performance declines.



Figure 1: Hebb's (1955) version of the Yerkes-Dodson principle - this version omits that observation that hyperarousal does not adversely impact simple tasks.

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However this picture does not give the full story. It omits Yerkes and Dodson's observation that beyond this so-called point of optimum stress, increased stress can actually cause an increase in performance if the task is simple, reaching a plateau after which performance does not increase. It is only when tasks are difficult that performance declines with increased arousal due to stress.

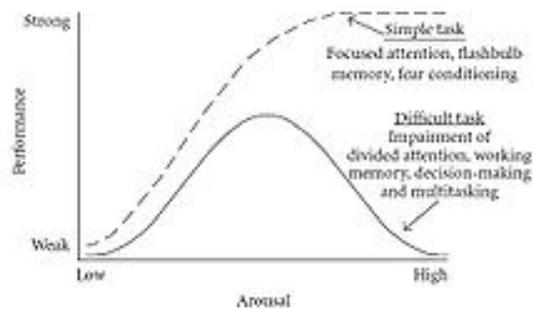


Figure 2: Original Yerkes-Dodson principle.

Positive stress is good for us - up to a point.

Positive stresses, such as the exhilaration caused by a thriller movie, a physical or mental challenge or an exciting football game are actually important for us to have in our lives. Without positive stress, we can become depressed and perhaps feel a lack of meaning in life. Not striving for goals, not overcoming challenges, not having a reason to wake up in the morning would be damaging to us. Positive stress keeps us healthy and happy. Eustress is a term coined by endocrinologist Hans Selye (1974) based on the work of Richard Lazarus (1966). Selye was one of the first stress researchers to acknowledge that stress is a necessity of life, stating that “we must not – and indeed cannot – avoid stress (1974:33).

According to Selye the body has to mobilise biological resources to *adapt* or adjust to a stressor. Selye refers to each person as having “adaptive energy.” However, this energy is finite because the human response system grows exhausted and humans are born to die. In conjunction with this non-specific stress response are stressor-specific effects. For example, mental-frustration can turn stress into distress, and may lead to undesirable physiological and psychological effects. Alternatively, demands that are challenging and lead to accomplishment or gain, and do not expend adaptive capacities, may turn stress into *eustress*, which is actually curative.

One much talked about subject associated with stress is the development of resilience, an essential characteristic for effective leaders. This article focuses on how we make decisions under conditions of stress. Leaders are primarily decision-makers therefore it is about leadership performance under stress.

The jury is still out on the effect of stress on decision making

Most researchers agree that not enough is known about how we make decisions while under extreme stress, the kind of stress that people experience when working with complex projects. It is often assumed that competence in judgment is always compromised under stress. For some individuals, heightened stress elevates their performance. Others are vulnerable to the negative impacts of stress, which results in diminished performance. For example an athlete knows that she or he should maintain a level of stress that is enough to stimulate top performance, but not enough to over-stress the body, because performance declines as the body becomes exhausted. This is an example of the Hebb's (1955) version of the Yerkes-Dodson principle discussed earlier in this article.

A qualitative difference in how people make judgments under stress

Researchers have found a qualitative difference in how people make judgments under stress. These differences are important for leaders to understand when they are leading teams during periods of uncertainty. We will return to the implications for project leadership later in the article. Dornier and Pfeifer (1993) found that the problem solving patterns were different for individuals under stress. They found that:

- Stressed subjects tended to focus on the general outline of the problem, while non-stressed individuals relied on in-depth analysis.
- Consequently, stressed subjects made fewer errors in setting priorities whilst non-stressed subjects controlled their operations better.

Decision-making patterns and co-operation

There are other effects of stress that should place project leaders on their guard. Kontogiannis and Kossiavelou (1999) investigated the decision making strategies and cooperation patterns of high performance teams under stress. They conclude that high levels of stress restricts cue sampling, decreases vigilance, reduces the capacity of working memory, causes premature closure in evaluating alternative options, and results in task shedding.

If, as research seems to indicate, leaders and teams tend to reduce the amount of information that they take in during periods of stress this is both an important and troubling finding. As a result of this behaviour decisions made under stress might be based on impoverished information, at the very time when rich information is needed. Also, because stress has the effect of encouraging premature closure, that is people tend to make decisions before all the relevant facts are known, there is a high risk that the decision will be inadequate for the situation. As part of this process important information might be set aside without due consideration.

However, as we know, during conditions of uncertainty, when risks are rapidly escalating and key stakeholders are demanding a decision, an effective leader needs to make timely decisions. In so doing he or she takes responsibility for the risk that the decision is the right one. Ultimately the leader, or leadership team, is responsible for the final call. Military history especially has demonstrated that very effective leaders tend to surround themselves with people and teams who will provide rich information and who are able to offer contrary opinions. Given the natural human tendency to restrict input during times of stress the challenge is to create a climate in which leaders and leadership teams have access to as much rich information as possible. In order to do this leaders must rely on their teams and in order to be able to rely on their teams during a crisis they need to help their teams prepare.

Building the team to support the leader during times of stress

High performance teams during uncertainty and crisis:

- show high levels of flexibility
- can perform tasks very rapidly
- use implicit communication rather than explicit communication
- use multi-dimensional information exchange rather than top down
- anticipate the information needs of others and their leaders
- comprise individuals who have achieved necessary levels of capability
- have high levels of trust between each other and the leadership team

A study of military commanders (Serfaty & Entin, 1993) found that teams with records of superior performance have one common critical characteristic: they are extremely adaptive to varying demands. They also observed that the high performance teams in their study could maintain performance using just one third of the time usually available to make decisions. However the mode of communication used by teams during stressful situations was different. Initially, the team responded to explicit requests in communications from commanders. As time pressure increased, they stopped waiting for explicit requests and instead provided commanders with information they implicitly determined would be useful to the leaders.

These findings are consistent with what many of the senior leaders in our study reported (Remington, 2010) and it is certainly consistent with what I have noticed in practice. Under conditions of uncertainty leaders must recognise that the normal top down channels of communication are no longer the most efficient or the most effective. As one leader put it "in a complex project the leader can never know everything. The teams often know much more ". Acknowledging with the team that the leader cannot have all the answers opens the pathway to the kind of multi-dimensional interactive communication that produces the rich information that the leader needs for decision-making under stress.

These studies observed teams that were already performing at high levels when under stress. However they support the theory that if you want your team to be able to perform well under stress team members need to behave and communicate intuitively with each other. Intuitive behaviour which often manifests as implicit communication does not happen overnight. It requires investment by leaders in the health of the team before the crisis occurs. It requires development of high levels of trust and respect for each other. They say that a team is only as good as its weakest link.

Therefore leaders must seek to understand the composition and capabilities of their team members and make sure that any gaps in capability are filled well before any crisis occurs. The leaders in our study understood the value of taking time and effort to prepare the team for high performance so that when the inevitable crisis occurred they performed 'like a well oiled machine'.

How leaders support teams when under conditions of stress

Leaders can support their teams during periods of stress by explicitly:

- encouraging teams members to use their intuition
- expecting team members to anticipate information needs of all stakeholders
- within bounds of security encouraging rich and multi-dimensional information transfer
- drafting high level plans to allow for flexibility and rapidity of response by teams
- protecting those assigned to detailed tasks from as much stress as possible
- communicating trust in the team
- avoiding micromanagement

Communication is key to supporting teams under stress. Explicit communication applies to low workload conditions. Implicit communication needs to increase as the work load increases. Serfaty and Entin (1993) suggest that changes from explicit to implicit communication can help teams maintain performance under time pressure. Implicit coordination patterns and anticipatory behaviour by the team are necessary under conditions of increased time-pressure. Leaders might encourage implicit communication patterns by updating team members frequently, encouraging team members to anticipate the needs of others by offering unrequested information, minimising interruptions to team members who are engaged with detailed or exacting tasks, and articulating plans at a high level in order to allow flexibility in critical situations.

These findings have important implications for project leadership. If leaders are able to focus on priorities whilst protecting their teams from the full impact of the sources of the stress it is likely that the teams will be able to continue to perform operations effectively. However when leaders are stressed there is also evidence that they will revert to their preferred (most comfortable) behaviour patterns (Porter, 1976). This is one reason why we see leaders reverting to micromanagement during times of stress when they should be focussing on the big picture and leaving the details to their teams. Micromanagement

usually serves to increase the stress for the teams rather than protect them from stress so that they can do the detailed operations and design work.

Conclusion

Although research into decision-making under stress has a long way to go there is a great deal of useful information based on empirical research to help leaders and leadership teams build robust decision-making processes and avoid the many pitfalls that lead to poor decision-making when under stress.

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