

## OVER G - FORCES

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**Abstract:** *Pilots are human beings, they perceive, feel, think and learn and suffer influences in their activity due to their health, environment and society. Over-G forces, pilots are a distinct segment of the general population. Domination refers to the complete trust in one's own possibilities and, also, to the sensation that they are superior to the situation's difficulties. The emotional intelligence determines the potential for learning practical skills. More complex tasks require more mental manipulation, and this manipulation of information in real time, constitutes emotional intelligence in action.*

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The pilots and the flight in general are surrounded by a mystic halo. From Orville Wright to Charles Lindberg, from the beginning of Tom Wolfe's work: "Right Stuff", and afterwards, the society have formed the heroic image of pilots. And people generalize this belief: that all pilots have to be special, different. Of course pilots don't disagree with this opinion.

Essentially, pilots are mere human beings. They perceive, feel, think and learn. They suffer influences in their activity due to their health, environment and society. They are motivated and perform complex tasks and they make mistakes. All of those are human activities.

The flight is a source for emotional stress. The departure from the ground and taking altitude, more exactly, loss of safe and stable support which are represented by the earth, constitute the first source of emotion for aviators. Another important role is played by the sensation of double confinement: to be locked in the narrow cockpit and to wear the tight flight suit with anti-G system. This sensation, sometimes cannot be canceled even if the pilot maintains a permanent radio contact with the control tower. If to all of these we add as an affecting element the significance of the peril of the environmental

conditions, it can be easily understood why, for some pilots, the flight to high altitudes represents a strong solicitation from emotional point of view.

Another affecting factor during the flight is represented by the high speed. To fly a jet requires from the pilot a high speed to carry out mind activities. In case the speed of mind activities is inferior to the succeeding speed of those exciting factors meant to cause actions, the pilot experiences the feeling of being surpassed by the plane or overwhelmed by the entire environment – and such a situation can release strong negative feelings. The high flying speed can also cause emotional feelings of positive type, as well. Such feelings consist of a special euphoria, a real speed mania, or an infinite whirl.

Over-G forces, with their physiological influences can be common in most acrobatic shows. Such influences can be complemented by a series of unpleasant sensations such an unsteady pulse, sharp pains, dizziness etc. Nevertheless, all of the above mentioned feelings also constitute sources of emotional solicitations.

Among the environmental factors that can apply a traumatic effect upon the central nervous system, causing negative feelings, one cannot omit noise – which is characterized by

high intensity and frequencies, and vibrations, in modern planes.

Besides the environmental conditions, another important source of emotions is given by unexpected events- difficult or even critical – which can appear during flight. The light emotional tension that every pilots starts feeling from the moment he has installed in the cockpit turns, in this kind of situations, into a more intense fear, even panic sometimes. Of course, those emotional reactions depend, on the one side, on the pilot's superior brain activity type, while, on the other hand, on the situation's nature and gravity. A huge affective impact appears during technical incidents like: engines problems, especially while still in take-off procedures, the blocking of commands, the blocking of the landing gear, the malfunction of the oxygen system, running out of gas in difficult weather conditions; all these are incidents that directly threaten the pilot's life.

Also, a traumatizing effect could be caused by the loss of radio communications with the tower when flying in difficult weather conditions

Among all the elements involved in the complex activity of flying, the ones that mostly influence the emotional reactions intensity are the unexpected situations, their sudden emergence.

According to K.K.Platonov, "None of the feelings that were revealed while studying aviators consists of an isolated mechanism. Most of the emotions that are related to the flying activity are caused by complex associations of non-conditioned-reflex and conditioned-reflex mechanism."

N.I.Astvaturov distinguishes two groups of emotions. The first category consists of consecutive emotions of the thinking process, while the second one consists of emotions that are caused directly by perceptions, sometimes even without any sense.

When it comes to us, we consider that the emotions - as reflections have some important specific forms related to the subject - situation relationship. As shown, this can be either inferiority, or balance, or even domination.

Inferiority represents neither the position in which – spontaneously or deliberately- the

subject feels that his actions possibilities are nor enough to defeat the situation. The balance situation in characterized by the fact that the subject' own forces are enough to defeat the situation and also by a relative tension caused by the awareness that an unexpected event could lead to the loss of balance. The cognitive activity that takes place on this emotional background represents the basis for such terms as calm or preventions. Domination refers to the complete trust in one's own possibilities and, also, to the sensation that they are superior to the situation's difficulties.

As passive emotional forms specific to dominations are: routine, lack of interest, indifference or, generally, the lack of emotional involvement in the activity.

As active forms we can refer to: courage, the so-called fighting-excitement, irritation, bravery etc.

Pilots are a distinct segment of the general population. In addition to flying skills, pilots are selected for their personalities and for a distinct "pilot persona." These characteristics make them safer pilots. Pilots tend to be physically and mentally healthy. Pilots tend to be "reality based," because by the very nature of their work they are constantly testing reality. There are those; however who would dispute this claim.

Pilots tend to be self-sufficient and may have difficulty functioning in team situations without CRM and other training. They have difficulty trusting anyone to do the job as well as they can. Pilots tend to be suspicious, even a little paranoid. In moderation, this quality serves them well within their environment and is, in fact, a quality that managements look for in the pilot personality. Outside the cockpit, this quality shows up in the tendency of many pilots to set two or three alarm clocks-- even though he or she may generally wake up before any of the pilots go off. The suspicious/paranoid tendency also affects the way pilots function in their private lives, as well. Pilots tend to be intelligent but are typically not intellectually oriented. They like "toys" like boats, cars, motorcycles, big watches, etc. They are good at taking things apart, if not putting them back together. Pilots are concrete, practical, linear thinkers rather

than abstract, philosophical, or theoretical. On a scale that ranges from analytically oriented to emotionally oriented, pilots tend to be toward the analytical end. They are extremely reality and goal-oriented. They like lists showing concrete problems, not talking about them. This goal orientation tends towards the short term as opposed to the long term. Pilots are bimodal: on/off, black/white, good/bad, safe/unsafe, regulations/non-regulations. Pilots are inclined to modify their environment rather than their own behavior. Pilots are competitive, being driven by a need to achieve, and don't handle failure particularly well. Pilots have a low tolerance for personal imperfection, and long memories of perceived injustices. Pilots tend to be scanners, drawing conclusions rapidly about situational facts. Pilots scan people as if they were instruments; they draw conclusions at a glance rather than relying on long and emotion-laden conversations.

Pilots avoid introspection and have difficulty revealing, expressing, or even recognizing their feelings. When they do experience unwanted feelings, they tend to mask them, sometimes with humor or even anger. Being unemotional helps pilots deal with crises, but can make them insensitive toward the feelings of others. The spouses and children of pilots frequently complain that the pilot has difficulty expressing complex human emotions toward them. For thousands of years our forefathers dreamt of flying, which gave place to many myths and legends. Flying was seen as a sign of power rising of the spirit, sign of superiority. It was also a desire of something which was impossible, and this desire continued until it had been realized. The flight is full of different emotions ranging from the anxiety of the pilot taking off, to the calmness with which he prepares the sails and carries out the pre-flight check ups, to the almost physical tension of the take off. Once the feet are off the ground everything seems to change, everything looks more beautiful and orderly. The cities and the houses change into a mosaic of colours surrounded by rectangles formed by the roads. The mountains, rivers valleys and everything else below can be looked at without meeting any of the obstacles

that they can bring. You have the feeling of having arrived, without desiring anything else other than what you have in that moment. It's a feeling of total fulfillment.

When you go in the air with strong wheater conditions, the pilot doesn't have the time to contemplate: the technical observer takes over. The pilot becomes a sophisticated computer that has to work out a great number of items: air turbulence, speed and direction of the wind, height, trajectory, obstacles, and the response of the sail. The pilot must be fully committed without any space for other thoughts. The healthy fear that reminds you that you are not as good as you thought. The adrenaline wakes all your senses up and then leave space to the coolness needed to carry on; but the reward is great. To arrive at the base of a cloud, contemplate the world from above, maybe in the company of a griffon.

Emotions are everywhere in our lives. At times emotions are what matters most, while at other times they recede to the background and rational thought takes center stage.

A simple, pragmatic way to understand emotions is to view the definition of emotional intelligence as the abilities to identify, use, understand and manage our own emotions and our emotional relations with others.

More complex tasks require more mental manipulation, and this manipulation of information - discerning similarities and inconsistencies, drawing inferences, grasping new concepts and so on - constitutes intelligence in action. Emotional Intelligence consists of a wide range of capacities which enable people to excel, such as intentionality, creativity, resilience, self-awareness, impulse control, persistence, and empathy.

A learned capability based on emotional intelligence that results in outstanding performance at work. Our emotional intelligence determines our potential for learning the practical skills based on the five elements: self-awareness, motivation, self-regulation, empathy, and adeptness in relationships. Our emotional competence shows how much of that potential we have translated into on-the-job capabilities.

The Emotional Intelligence capabilities give the ability to manage ourselves emotions and our relationships effectively.

Emotional Intelligence fundamental capabilities are:

*Self – Awareness*

- Emotional self-awareness: the ability to read and understand your emotions as well as recognize their impact on work performance, relationships, and the like.
- Accurate self-assessment: a realistic evaluation of your strengths and limitations.
- Self-confidence: a strong and positive sense of self-worth.

*Self – Management*

- Self control: the ability to keep disruptive emotions and impulses under control.
- Trustworthiness: a consistent display of honesty and integrity.
- Conscientiousness: the ability to manage yourself and your responsibilities.
- Adaptability: skill at adjusting to changing situations and overcoming obstacles.
- Achievement orientation: the drive to meet an internal standard of excellence.
- Initiative: a readiness to seize opportunities.

*Social Awareness*

- Empathy: skill at sensing other people's emotions, understanding their perspective, and taking an active interest in their concerns.
- Organizational awareness: the ability to read the currents of organizational life, build decision networks and navigate politics.
- Service orientation: the ability to recognize and meet customers needs.

*Social Skill*

- Visionary Leadership: the ability to take charge and inspire others with a compelling vision.
- Influence: the ability to wield a range of persuasive tactics.
- Developing others: the propensity to bolster the abilities of others through feedback and guidance.

- Communications: skill at listening and at sending clear, convincing, and well-tuned messages.
- Change catalyst: proficiency in initiating new ideas and leading people in a new direction.
- Conflict Management: the ability to de-escalate disagreements and orchestrate solutions.
- Building bonds: proficiency at cultivating and maintaining a web of relationships
- Teamwork and collaboration: competencies at promoting co-operation and building teams.

What's new is the recent identification of these skills under the singular phrase "emotional intelligence", with an accompanying scientifically based systematized approach to personal development that's rapidly attracting attention within corporate and organizational settings today. Research shows that emotional intelligence may actually be significantly more important than cognitive ability and technical expertise combined. In fact, some studies indicate that EQ is more than twice as important as standard IQ abilities.

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