G'day!

We hope your year has started well and you're already taking on the challenges of 2016. In the upcoming months, we are developing a new presentation skills course and during its development we’d like to share with you some of the insights about public speaking that we’ll discuss in the course. Read on for the first post in this series, which is about the origins and manifestations of public speaking anxiety. Also, we’re excited that a recent paper that we've provided editorial support on was published this week in PNAS (see Noteworthy section). Enjoy!

And we’d also love for you to connect with us via our website, email, LinkedIn, Twitter, Google+ or Facebook.

The Elevate Team

Speak up: Part 1

Understanding public speaking anxiety is the first step in overcoming it.

Sweaty palms, racing heart, shaky hands and trembling voice. All trumped by vicious nausea that forces you to divest yourself of your inner contents in a nearby bathroom. I’ve been there; in the bathroom one minute, called onto stage the next. It’s utterly terrifying. Many of us have experienced fear, anxiety or nervousness while presenting a talk or poster at a conference, giving a lecture to students, persuading policy makers, or speaking on television or radio. To understand
this nerve-wracking experience, and give less anxiety-ridden speeches in the future, let’s discuss Public Speaking Anxiety (PSA).

When we experience PSA, our bodies respond in three ways: physiologically, cognitively, and behaviourally [1]. Physiologically we may experience an increased heart rate, a change in blood pressure, and sweaty palms [1]. Behaviourally we may exhibit stiffness, motionlessness, restlessness, trembling or agitation. And cognitively we may be overwhelmed by critical self-talk and thoughts [2]. No wonder PSA can be terrifying!

To further elaborate on the above responses, let’s first examine the physiological responses. These responses are our body’s way of coping with stress. More specifically, we may experience the fight-or-flight response, whereby the sympathetic nervous system launches into action when we believe we are in a risky or potentially life threatening situation. Adrenaline is released, perspiration increases, tremors occur, and pupils dilate, amongst other symptoms [3]. Public speaking is potentially risky because we are vulnerable. We reveal ourselves and risk the judgement and social acceptance of our peers. In primitive times, this could lead to one being ostracized from the social group, and in turn this could lead to death because the individual would no longer have the protection of the group [4].

To make matters worse, when our audience observes us exhibiting our PSA behavioural responses, it has a negative impact on our credibility and potential impact on an audience [1]. Furthermore, if you’re a speaker who notices a negative response from the audience (so-called social-assessing), this will further cause you anxiety; you know that they know that you’re nervous!

Thoughts such as this add to your cognitive responses experienced during PSA, where negative self-focussed thoughts assert themselves [1]. In fact, studies of how the frequency of different types of ‘self-talk’ (an internal dialogue with oneself) affect PSA levels show that more anxious individuals experience more frequent self-critical and social-assessing self-talk than those who are
less anxious [2]. Your belief in yourself becomes compromised by your own
thoughts about your lack of ability, competency, worth, and knowledge.

It can’t seem to get much worse can it? And although public speaking rarely
results in death, we are often beset by these overwhelming responses, so it’s
not hard to believe that the fear of public speaking is the “single most
commonly feared situation reported in both community and university
samples”[5].

Yet most of us are required to engage in public speaking; it’s part of our jobs,
our daily lives. So how can we tackle PSA? A good starting point is to
understand the inner workings of PSA and how it affects you individually, and to
develop a toolbox of strategies that can help you manage the physiological,
cognitive and behavioural responses of PSA. In my upcoming posts I’ll describe
how you could create your own PSA strategy toolbox, and specifically discuss
topics such as power posing, breathing exercises, positive thought processes,
practice and preparation, and turning anxiety into excitement. Stay tuned!

[1] A Racing Heart, Rattling Knees, and Ruminative Thoughts: Defining,
Explaining, and Treating Public Speaking Anxiety, G.D. Bodie, Communication
Education 59, 70 (2010).

[2] The relationship of self-talk frequency to communication apprehension and
public speaking anxiety, X. Shi et al., Personality And Individual Differences 75,
125 (Mar 2015).


[4] The thing we fear more than death, G. Croston, Psychology Today (Nov
2012).

[5] The Speech Anxiety Thoughts Inventory: scale development and preliminary
psychometric data, Cho et al., Behaviour Research and Therapy 42, 13 (Jan
2004).

Cara Harrison
Noteworthy

Parallel computer realized with nanotechnology and biology

A study (which we had the pleasure to provide editorial support on) published this week in the Proceedings of the National Academy of Sciences [1] reports a new parallel-computing approach based on a combination of nanotechnology and biology that could potentially solve complex combinatorial problems (Figure 1). The approach, developed collaboratively by research groups in Sweden, Germany, Canada, UK, USA, and the Netherlands, is scalable, error-tolerant, and energy-efficient, and can be implemented with existing technologies.

Figure 1 | Fluorescence micrograph of actin filaments exploring nanoscale lithographically designed channels encoding the combinatorial Subset Sum Problem (here for the integers {2,5,9}) to find its solutions (green numbers). Credit: Mercy Lard.


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