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A Matter of Opinion:

The Silent Spiral of Cardiovascular Research

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Summary

An exploration of the causes and consequences of silence with a decidedly poignant slant toward the detrimental effect upon cardiovascular studies. The intent of this short monograph is to persuade those struggling with their conscience that one should be aware of and resist the implicit pressure to conform that we face as researchers.

Keywords

Editorial; opinion; silence; conformity

“Opinions are made to be changed - or how is truth to be got at?”

Lord Byron

On April 11, 2016, an e-mail appeared in my inbox with an invitation to author a “Viewpoint” article for *Circulation Research*. This relatively new type of submission was solicited with clear expectations: “...what sets Viewpoints apart from all other articles that we publish is that they should convey bold opinions, even if they are irreverent”; “...authors of Viewpoints are encouraged to express their opinions freely and not shy away from controversy, if appropriate.” That’s perfect, I thought. Being no stranger to embroiling myself in written op-ed pieces^{1,2} that undoubtedly contributed to my use of Lotensin for high blood pressure over the last dozen years, I figured I’d have no problem coming up with an issue to pontificate upon to enlighten my colleagues. That is, until I began trying to settle upon a specific topic in cardiovascular research that I know enough about to have a “bold opinion” worth sharing. In fact, I’ve started this assignment three times already on different aspects of research controversies and ground to a halt. Then I asked myself why each effort provoked successive rounds of anxiety and self-doubt. And I believe I have found the answer to my problem – and by diagnosing my trouble spot the topic of my Viewpoint article revealed itself.

My personal angst over writing this Viewpoint article highlights a struggle many of us wrestle with to survive in the larger research community. We are admonished to be bold, to

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have strong opinions, and freely debate with our peers in written form as well as in public venues. In fact, many of my colleagues and I share invigorating e-mail exchanges and provocative personal discussions that we thoroughly enjoyed through the years. But rarely (if ever) have I heard the passionate “off the record” opinions of my colleagues shared with comparable ardor or conviction in any public venue whether in written or spoken form. My colleagues and I are not particularly shy or introverted personalities (those who know me would rush to agree on the latter self-characterization), so why are we reticent about our professional opinions when a larger audience is listening? Why would senior researchers considered to be “thought leaders” (or so I’ve been flatteringly told) with demonstrated expertise in controversial research areas and established careers fall silent when asked to weigh in? After some self-introspection on this subject and discussion with opinionated but taciturn peers I think I know the answer. While my epiphany may not come as a surprise to our enlightened colleagues, this issue points to a fundamental disconnect in scientific discourse that hampers achieving consensus and pursuit of scientific excellence.

Reluctance to reveal one’s difference of opinion within group settings has been documented as a political science and mass communication theory dubbed the “Spiral of Silence” originally described by the German political scientist Elisabeth Noelle-Neumann.³ All of us have experienced being in an awkward discussion and choosing to remain quiet because our own opinion differed from the group consensus. What makes the “Spiral of Silence” so dangerous from a scientific perspective is how the process extinguishes diverse opinions and pushes for conformity. Simply put, when a new idea is presented to the community there can be a variety of opinions and perspectives. However, as more people within the group settle upon one idea as being “true” the likelihood for the minority opinion to be expressed fades away. Then, every time someone chooses to remain silent in the face of prevailing opinion the less is known about their opinion and it disappears from public consciousness. Eventually, popular consensus dominates individual objections because dissenting opinions become non-existent in the public setting. Individuals may disagree but choose to withhold their beliefs due to fear of isolation, neglect, or exclusion. The concept of the spiral highlights the process that over time drives development of a strong majority position and a concurrent increase in the number of people unwilling to express a minority position (Fig. 1). Outliers who are hardcore non-conformists or the avant-garde stand by their opinion regardless of the group climate and these individuals face risk of consequences by refusing to embrace the popular viewpoint. Noelle-Neumann regards hardcore and avant-garde minorities as the only hope for changing public sentiment by maintaining unpopular positions. There are many excellent articles and reviews providing examples, critiques, and interpretations of the Spiral of Silence theory.⁴⁻⁶

Comprehending the Spiral of Silence led to application of this theory relative to personal experiences in cardiovascular research. Here I offer just three examples although many more could be included in this list: 1) challenging assertions of a speaker during the Q&A following a presentation, 2) submitting a funding proposal or manuscript for review, or 3) serving on a review panel determining the prioritization of proposals for funding decisions. Presumably all of us have had the experience of sitting through a presentation, not feeling particularly comfortable with the results, interpretations, or conclusions of the talk, and deciding to stay seated rather than approach the microphone. My personal approach of

venting to whomever is unfortunate enough to be sitting nearby is the compromise solution I've adopted in such circumstances. In a different media and venue, many can identify with the decision to omit opinions or assertions from proposals or manuscripts, believing that discretion and selective framing of our ideas so as to not differ from the prevailing wisdom will enhance likelihood for enthusiasm and support from reviewers. Early in my career a well-established mentor told me that he wrote grant proposals to get the money to do the research that reviewers would never give him the money to do. Of course, I'm sure he did the research from the proposal he promised to do *in addition* to the more controversial and less popularly supported studies that he felt were truly innovative, creative, significant, and high impact. And for those who have served on review panels, a complex social interpersonal dynamic exists wherein I've watched as colleagues acquiesce to either enthusiastic or excoriating summary judgments and quietly vote within the stipulated range of numerical scores rather than announce themselves at odds with the majority opinion. In all these scenarios, the perceived progression from an initially unbiased and open-minded group opinion to a predominant narrowly-held consensus puts pressure upon non-conformists to toe the line rather than stand apart from the flock. The solution settled upon in an attempt to counteract the Spiral of Silence is the sacrosanct anonymity of peer review and assurances that identities of those rendering judgment will be protected from public disclosure. Obviously, such anonymity is impossible at a meeting during a presentation and significantly limited in manuscript or funding proposal reviews by the dissemination of editorial board memberships or study section panel rosters. Junior faculty in early career stages are admonished to be mindful of the potential impact such service can have on their careers and weigh the pros and cons before accepting a position as reviewer. So what is the potential backlash resulting from resisting the centrifugal force of the Spiral? In essence, fear of either political fallout or professional damage.

The Spiral of Silence invokes fear of isolation as the motivation for compliance with the majority opinion. Social psychology studies have shown that people are generally more comfortable agreeing with opinions they know are wrong instead of telling others their ideas.⁷ The Spiral assumes that people are watchful of their environment for the popular opinions and behaviors and express themselves accordingly. For those who find themselves in the minority, they tend to remain silent⁸ unless they take pride in being the vocal minority who do not fear isolation. The vocal minority is comprised of hardcore nonconformists who have already been rejected for their beliefs and have nothing to lose by speaking out, or the avant-garde intellectuals, artists, and reformers who are convinced they are ahead of the times.⁹ In our research community with relatively few degrees of separation, digging into a vocal minority position can risk ostracism: a subtle "social death penalty" that can leave victims helpless, feeling unworthy of attention, humiliated, and without recourse. The direct impact upon one's career can be devastating: loss of funding, inability to publish, shunning from presentation at prestigious meetings, and marginalized community service on editorial boards or review panels. In the most extreme form, the Spiral pushes for conformity (agreement or silence) and threatens excommunication for deviants.

Expressing an unpopular opinion can be done without being contemptible. Importantly, the goal should be to change people's minds about the subject or correct a perceived mistake, not to show off one's superiority. There's a huge difference between having an *argument*

versus a *fight*: arguments are about changing minds and bringing people to agree with a viewpoint, whereas fights are intended to give the other person a literal or metaphorical beating. As soon as a fight begins the argument ends and people quit listening, and insults only serve to reinforce belief in their initial position even if it is factually wrong. Equally important is to listen to specifics the other person delivers rather than creating a “straw man” to argue with based upon what you want to believe about their viewpoint (e.g. “Debate the real opinion, not the one in your head”).¹⁰ If you are a relative unknown in the community, then the group perception of your contribution is neutral until you speak up. Their first impression will determine how they value your participation, which will be subsequently reinforced by your prior behavior. Connecting with people is essential to persuade them, and people are more likely to welcome time from a person who is possibly wrong but enjoyable rather than a pompous officious know-it-all even if they are usually right. And debating others into silence doesn’t imply winning the argument, but rather a form of bullying leading to the feeling that further discussion with you isn’t worth their time. In the end, having a minority opinion should not be a problem as long as the group is tolerant and the basis for disagreement can be articulated and received in a collegial fashion. Of course, these simple yet lofty goals are easier to write about than act upon in the crucible of real-word interactions when careers hang in the balance.

You are probably cognizant of whether your opinions are likely to be popular or not. If so, then you have already taken the first step into the Spiral of Silence. I urge all of the cardiovascular research community to resist the temptation to fall silent. Science evolves and sharpens focus through healthy dialog and productive disagreement. Listening to those who challenge our opinions and ideas doesn’t weaken us, but makes us stronger and promotes development of broader-based inclusive perspectives that we can all share. None of what I’ve written here is particularly new, as even Marcus Aurelius had advice on how to keep an open mind: *“Everything we hear is an opinion, not a fact. Everything we see is a perspective, not the truth.”*

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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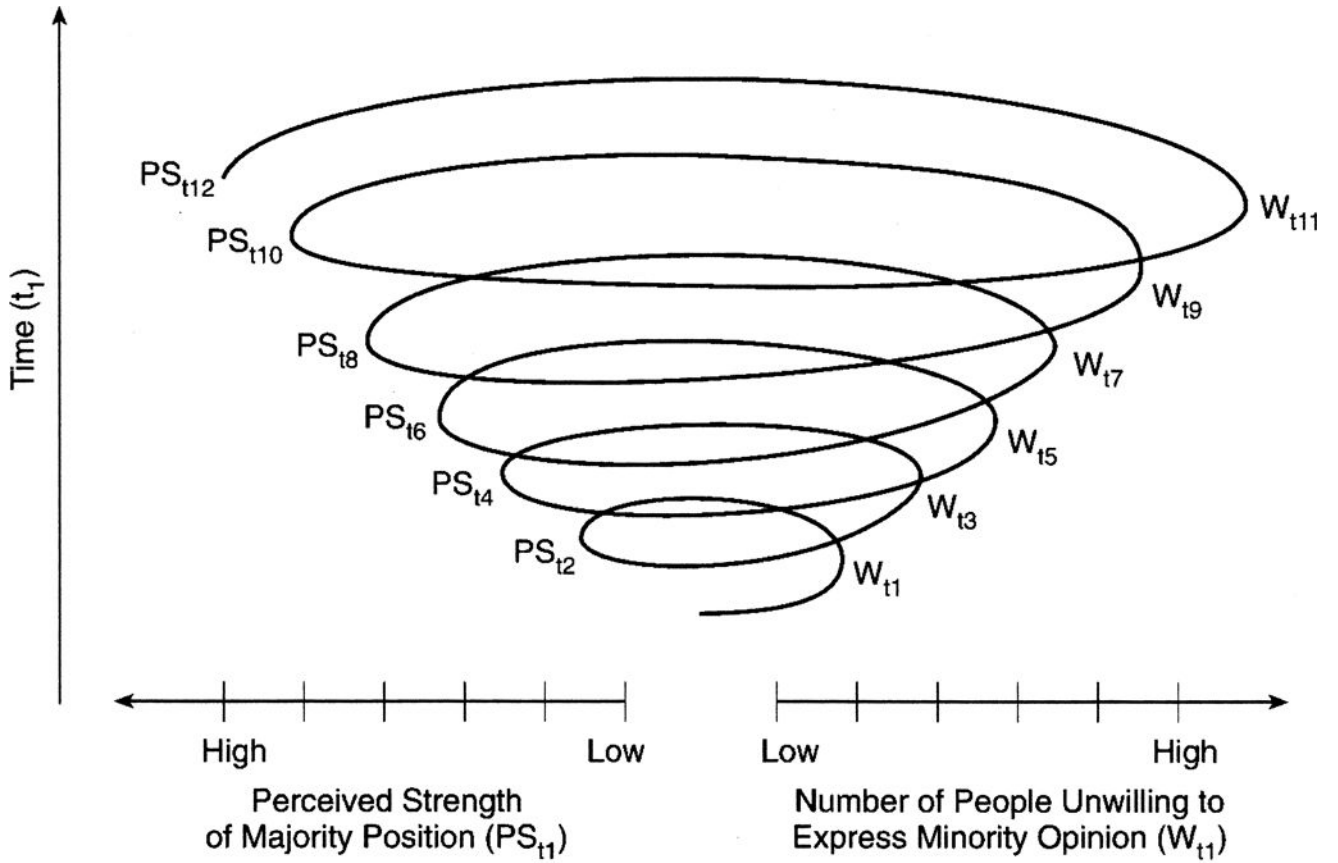


Figure 1. Schematic representation of the Spiral of Silence showing that as time increases (y-axis), the group moves from low to high perception of a majority position (x-axis centric movement toward left shift) while concurrently the number of people unwilling to express a minority opinion increases (x-axis centric toward right shift). Reproduced from reference ⁴.