Teaching Current Directions in Psychological Science

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Aimed at integrating cutting-edge psychological science into the classroom, Teaching Current Directions in Psychological Science offers advice and how-to guidance about teaching a particular area of research or topic in psychological science that has been the focus of an article in the APS journal Current Directions in Psychological Science. Current Directions *is a peer-reviewed bimonthly journal featuring reviews by leading experts covering all of scientific psychology and its applications, and allowing readers to stay apprised of important developments across subfields beyond their areas of expertise. Its articles are written to be accessible to nonexperts, making them ideally suited for use in the classroom.*

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Brain Size Matters

Inspiring Interest in Interests

Brain Size Matters

By C. Nathan DeWall

Dunbar, R. I. M. (2014). The social brain: Psychological underpinnings and implications for the structure of organizations. *Current Directions in Psychological Science, 23*(2), 109–114. doi: 10.1177/0963721413517118

Think of the most expensive thing you own. You might have a fancy laptop, the latest smartphone, or even a swanky house or luxury vehicle. But none of these possessions cost as much as your brain. Your brain represents about 2% of your body weight, roughly 3 pounds, but it consumes almost 20% of your body's energy. Why did we inherit what APS Fellow Dan Gilbert calls the "three pounds of meatloaf" we have between our ears when it costs so much to operate?

According to APS Fellow Robin Dunbar (2014), our brain size is no accident. Our brains expend lots of energy, but they are just large enough to help us have a certain number of social contacts. Dunbar's *social-brain hypothesis* predicts that the bigger cerebral cortex people have, the better they can understand others' beliefs, a key marker of social functioning. The social-brain hypothesis has received considerable support: Our brain size evolved to accommodate social groups that contain roughly 150 people. The number applies to small-scale communities and modern personal networks, including the most modern of all personal networks: number of Facebook friends (Wolfram, 2013).

A small number of our social-network members, around five, consume much of our time. One reason

why we keep only five people close is because that is how many other people's mental states we can understand at once (Lewis et al., 2011). We also have limited time and cannot distribute it evenly between the remaining 145 network members. Instead, we organize our social groups into layers of varying sizes — 15, 50, 80 — based on genetic relatedness, potential for intimacy, and other forms of relational closeness.

To take this research into the classroom, instructors can use the following three activities. The first activity works best if instructors use it before discussing the social-brain hypothesis. Instructors can do the following:

Ask students to list the most expensive thing they currently own, and ask them what they think is the most expensive thing they will ever own.

Share the information regarding the relative size of the human brain and its energy consumption.

Ask students to discuss why they think we have such large, energetically expensive brains. Why might the benefits outweigh the tremendous costs?

Summarize the social brain hypothesis.

Encourage students to consider why brain size relates to social life. How might people's personal networks change if they had smaller brains? According to Dunbar, would having less total cerebral cortex relate to having a smaller personal social network?

The second activity is called "Getting in Touch With the Layers of Your Network." Ask students to open their cell phones or email accounts and count the number of people with whom they have communicated over the past 3 days (e.g., text messages, phone calls, emails). Instructors may also ask students to estimate the number of communications they sent and received from each person. Next, have students separate these personal-network members into three categories (using Dunbar's language):

Support clique: people you turn to in times of emotional distress

Sympathy group: people you often see and who can help you achieve your goals (e.g., giving you a loan, helping you with a class project)

Outer layer: people with whom you have only weak relations (e.g., a cousin you have not seen in 2 years)

According to Dunbar (2014), the support clique and sympathy group should have about 5 and 15 members, respectively. How do these estimates relate to student experiences? If students listed the number of communications with each personal-network member, what percentage came from the support clique, sympathy group, and outer layer? Remind students that these are simply averages. Some people might have more or fewer personal-network members, depending on their general need for closeness, extraversion/introversion, and other personality traits.

The final activity, titled "Expand Your Core," takes place primarily outside of class. Print the following

instructions and hand them to students.

EXPAND YOUR CORE

Instructions: According to Robin Dunbar's social-brain hypothesis, the human brain evolved to accommodate social groups of about 150 people. We have about 5 people in our *support clique* (people we turn to in times of emotional distress). We spend about 40% of our time with these people.

List the 5 people you would include in your support clique.

1. _____

2. _____

3. _____

4. _____

5. _____

Now we want to encourage you to expand your core social group. Over the next 3 days, try to include ***3 more people*** in your support clique.

List the 3 people you will add to your support clique.

1. _____

2. _____

3. _____

Instructors can gauge their students' experiences in numerous ways. Students can write a 250-word summary of their experiences as a blog post or informal reflection paper, post a video describing their experiences to YouTube or a class website, or discuss their experiences with a partner during class. How did the activity change their daily lives? How well did the activity match predictions from the social brain hypothesis? For example, how easy and enjoyable was it to expand one's core social group?

No matter how much we rely on our brains, we often take for granted how and why brain size matters. Our brains might be the most costly things we'll ever own, but their price pays the cost of admission to a socially connected life. Far from being an accident, our brain size allows us to reap the benefits of our uniquely human social lives.

Inspiring Interest in Interests

By David G. Myers

Rounds, J., & Su, R. (2014). The nature and power of interests. *Current Directions in Psychological Science, 23*(2), 98–103. doi: 10.1177/0963721414522812

"So what interests you?" many of us have asked prospective or new students. "What do you love to do? What are you doing when time just flies — and what are you doing when time seems to stand still?" By exploring what a student enjoys, we seek to discern what academic and vocational pursuits might fit the student's interests and skills. "The best job," we may advise, "is one that pays you to do what you love — be it doing things with your hands, thinking of solutions, expressing yourself creatively, assisting people, being in charge, or working with data."

Happily, as APS Fellow James Rounds and Rong Su explain, there is a well-developed career-counseling science that aims to assess people's interests systematically and to alert them to well-matched vocations. Among its findings are these:

Interests are *trait-like.* Individuals have differing interests, which become quite stable by early adulthood.

Interests are *contextualized.* Unlike traits such as extraversion, conscientiousness, or intelligence, interests have a focus — in particular activities in certain environments.

Interests are *motivational.* Like other motivations, they energize and persistently direct individuals' behavior toward attaining goals.

Thus, interests have repeatedly been found to predict academic and occupational choice and flourishing. That simple fact has enabled the creation of interest inventories that allow test takers to identify majors and vocations where people with kindred interests are flourishing — and where perhaps the test takers themselves would, too. Indeed, report Rounds and Su, findings from a recent longitudinal study of 400,000 high school students show that "interests uniquely predict academic and career success over and above cognitive ability and personality." The power of well-matched interests to predict greater income, for example, "greatly exceeded the contributions of ability and personality."

So how might we help first-year students better understand their interests and select occupations informed by those interests? In personal correspondence, Rounds and Su pointed us to an online short-form interest inventory offered by the US Department of Labor sponsored Occupational Information Network (O*NET). At www.mynextmove.org/explore/ip, students will need about 10 minutes to respond to 60 items, indicating how much they would like or dislike activities ranging from building kitchen cabinets to playing a musical instrument. They are then given feedback on how strongly their responses reflect the six "RIASEC" interest types specified by vocational psychologist and APS Fellow John L. Holland: *R*ealistic (hands-on doers), *I*nvestigative (thinkers), *A*rtistic (creators), *S*ocial (helpers, teachers), *E*nterprising (persuaders, deciders), and *C*onventional (organizers). Finally, depending on how much training students indicate being willing to undertake, they are shown occupations — selected from a

national database of more than 900 occupations — that are congruent with their interest patterns.

Before taking the brief interest inventory, students could also be invited to list their top three career ideas. A visit to www.OnetOnline.org will enable them to explore information about both their preexisting career ideas and additional possibilities suggested by the inventory.

References

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