Online Science Briefs

Anita Taide
PWR632: Science Writing
Week 7
December 6, 2009

BRIEF 1: ARTICLE ON GENETIC MATCHMAKING

Explanation of publication choice/supplemental material:

I plan to submit the following article to *Seed* magazine.

The magazine's objectives are described on its Web site (http://www.seedmagazine.com):

Science is changing our world. It is behind the transformations—social, economic, artistic, intellectual, and political—that are defining the 21st century. Through this lens, and with the newest tools of media and journalism, we aim to tell the fundamental story of our world today and to provide information and knowledge to help you prepare for the story tomorrow.

I thought an article on genetic matchmaking would be ideally suited for this magazine, since it would incorporate both social and scientific elements as well as represent the concept of a changing world (which is the primary focus of the magazine). The article would be best suited for the "Culture" section.

The readers of *Seed*'s online magazine are on average 32 years old and are 59% male/41% female. The readers' average household income is $78,000, and 98% of the readers are college-educated. The magazine's readers possess an interest in modern science and how it intersects with society.

Since my topic relates to online dating, the magazine's target audience would be perfect (mixture of male and female audience -- particularly readers in their 30's -- who spend much of their time online).

I also chose this magazine since it appears that it has not published an article on the topic of genetic matchmaking recently (in fact, I could not find a single article on this subject in the magazine's online database).

In my submission to *Seed*, I plan to include the supplementary photograph attached to my email (indicating the source of the photograph as Tamara Brown, cofounder of GenePartner).

Note: The following article is displayed exactly how it would appear on the Seed Web site (in accordance with the format used by other articles on the site). In my actual submission, I will exclude the hyperlinks (as per the submission terms and conditions; these are indicated simply to show how the article might appear on the Web site).

A SWISS COMPANY SHOWS HOW GENETIC MATCHMAKING MAY BE THE NEXT BIGGEST THING IN THE WORLD OF ONLINE DATING.

The Perfect Pair of Genes
THE BIG IDEA / BY **ANITA TAIDE** / DECEMBER 6, 2009

Since the 1980s, DNA testing has been used to solve crimes and unite families. But can it help you find your future spouse? Tamara Brown thinks so.

In February of last year, Brown -- a Swiss scientist with a background in clinical genetics and neurobiology -- started GenePartner. The company provides DNA testing to help people find their perfect matches. The test itself is performed at home through a simple cheek swab. The results match individuals on several factors, including level of attraction, type of interest, and even the probability of a successful pregnancy. The basic idea is that the more genetically compatible two people are, the more likely they are to have a long-lasting and successful relationship.

So what determines genetic compatibility? Brown points to a section of DNA known as *HLA (human leukocyte antigen)*. HLA molecules play a central role in the body's immune responses; the greater the variety of HLA, the greater the body's immunity against disease. As a law of nature, Brown says, a person tends to be attracted to someone whose HLA complements their own. Not only does this result in a biologically harmonious relationship, but it also ensures that a couple's children will have a greater variety of HLA's – and therefore be better protected against disease.

Brown's inspiration for starting GenePartner came from a 1985 study conducted by Claud Wedekind at the University of Bern in Switzerland. The study implies that women prefer the scent of a man whose HLA is different from their own.

Smell is a vital element in attraction, says Brown. "The HLA principle is communicated through a sense of smell. Now that we have online dating, people are missing this natural screening tool."

Anju Rupal puts it plainly: "If you can't smell that person, you're not going to reproduce." Rupal is the founder and CEO of Sense2Love, an international dating site set to relaunch in late January. The site will match members based on sociological characteristics, while GenePartner will match them on biological traits. Together, the two companies hope to provide customers with the ideal match. "It's going to be like a one-stop shop to do a self-discovery about yourself and about your relationships," says Rupal.

But not everyone is convinced.

"I do not know of any particular genetic test that would identify a good match," states Ian Krantz, director of the genetics training program at Children's Hospital of Philadelphia. Krantz states that while HLA dissimilarity may produce stronger immune systems in offspring, it does not likely translate into the emotional compatibility of partners.

Phillipe Rushton, a psychology professor at the University of Western Ontario, acknowledges that HLA does play a role in attraction – but that it accounts for only a small part of the human genome. Rushton is well-known in the scientific community for his *Genetic Similarity Theory*, which states that individuals tend to be attracted to those who are genetically similar to themselves.

However controversial genetic matchmaking may be, it's fast becoming a trend. GenePartner already has over 1,100 clients, and the company's technology will be offered on three new sites next month. In addition, the dating site ScientificMatch offers a similar service.

To anyone who doubts the validity of genetic matchmaking, Rupal offers some advice: "I think before blowing your trumpet, you should try it."

Tags: BIOTECHNOLOGY / DNA / GENETICS / HAPPINESS

Note: Articles on the Seed Web site do not formally credit the sources/use any particular citation format, nor are they presented at the end of the articles. However, my sources are as follows:

Interviews

Tamara Brown
Cofounder and Head of Science
GenePartner
info@genepartner.com
41 43 928 32 63

Anju Rupal
Founder and CEO
Sense2Love
anju@sense2love.com
41 79 421 5647

Ian Krantz
Director, Medical Genetics Training Program
Children's Hospital of Philadelphia
krantz@email.chop.edu
215-590-2931

Phillipe Rushton
Professor of Psychology
University of Western Ontario
rushton@uwo.ca
519-661-3685

Web sites

http://www.genepartner.com

http://rspb.royalsocietypublishing.org/content/260/1359/245.full.pdf (Article about the role of HLA dissimilarity in human attraction; published in 1985 by Claud Wedekind in the journal *Proceedings of the Royal Society*)

http://psychology.uwo.ca/faculty/rushtonpdfs/n&n%202005-1.pdf (Article about Genetic Similarity Theory; published in 2005 by Phillipe Rushton in *Nations and Nationalism*)

BRIEF 2: ARTICLE ON ENGINEERING VIDEO GAME

Explanation of publication choice/supplemental material:

I plan to submit the following article to *Popular Science* magazine.

According to the magazine's Web site (http://www.popsci.com):

Popular Science covers new and emerging technology in the areas of science, automobiles, the environment, recreation, electronics, the home, photography, aviation and space, and computers and software. Our mission is to provide service to our readers by reporting on how these technologies work and what difference they will make in our readers' lives. Our readers are well-educated professionals who are vitally interested in the technologies we cover.

The magazine's media kit states "PopSci.com attracts an affluent, educated audience of tech-savvy early adopters who love to find out how things work." The audience is comprised of mostly college-educated males age 25-54.

Based on this information, I thought my audience would be interested in an article covering the development of a new video game as a learning tool. Although the audience is not in the same age range as typical university students, they are progressive, college-educated individuals -- and would therefore have an interest in promoting learning through new techniques. The article would incorporate both social and technological elements and would be best suited for the "Gadgets" section, under the "Video Games" subsection.

It does not appear that *Popular Science* has published an article on this topic.

In accordance to the magazine's writers' guidelines, my submission to *Popular Science* would include a corresponding high-resolution photograph. Currently, I have attached a JPG; however, I am waiting to see if Dr. Tang can provide me with an EPS of the photograph. Since the magazine's Web site uses descriptive captions for its graphics rather than just the names of the sources, I would provide the following caption (using the format "entity photographed, description, source):

The Traffic Light Control Component of Rowan University's New Virtual Reality Game The application applies fundamental engineering design techniques in a real-world setting, with graphics mimicking traditional video games. *Rowan University*

Also as per the guidelines, I would provide the magazine with the contact information of my interviewee:

Ying (Gina) Tang, Ph.D.
Associate Professor
Electrical and Computer Engineering
Rowan University
201 Mullica Hill Rd, Glassboro, NJ 08028
Email: tang@rowan.edu
Tel: 856-256-5339; Fax: 856-256-5241

Rowan University Introduces Engineering Video Game

The virtual reality game is scheduled to be released to Rowan students next fall.

By Anita Taide

A milestone is about to be set in the world of computer gaming. Not by Blizzard, Valve, or any of those other big-name gaming companies – but by Rowan University. Beginning next fall, the New Jersey institution will be supplementing its highly-acclaimed electrical and computer engineering (EC) program with a virtual reality game. The game is being developed by Professors Gina Tang and Xiufang Chen, with the assistance of Rowan engineering students and professors from cooperating universities. The game will be used a regular component of the school's EC curriculum, changing the face of engineering as we know it.

The game was inspired by CAVE (Cave Automated Virtual Environment) – a 10-square-foot enclosure from which the Rowan engineering department virtually tests devices for organizations like NASA and the U.S. Navy. So with all of this advanced technology already in place, why bother? It's all about portability. "From an educational point of view, we want high portability," says Tang. "Once it's completely tested, we are going to make executable files. That way, we can deliver it to any university."

The game will also have an online component that will allow students in different universities to chat while resolving problems together. This collaborative environment embraces one of the most recognized theories in the world of education: learning is social. Combined with text instructions and cues, the social aspect of the game is designed to improve the reading comprehension levels of engineering students. "We wanted to come up with something where we could improve the literacy and comprehension of engineering students," says Tang. "It's proven that using the [reading] techniques puts students in a better position to comprehend more complicated content areas."

Through September 2012, Tang and her team will develop, monitor and test the game internally. After this phase, not only will Rowan make the game accessible to other universities, but also to local math and science teachers as well as middle school, high school and transfer students.

The team began developing the game in September 2009, less than a month after receiving a $199,986 grant from the National Science Foundation. Currently, they are in the process of developing an application that applies digital logic to traffic light control systems. Other applications will include designing a voting system, distributing electric power to a city and finding the weakest link in an electric grid network.

Since each program embraces a unique digital system design or circuit analysis concept, the game will replace the traditional laboratory portion of Rowan University's engineering curriculum.

I don't see a lot of students objecting to that.

Note: Articles on the Popular Science Web site do not formally credit the sources/use any particular citation format, nor are they presented at the end of the articles. However, my sources are as follows:

Interviews

Ying (Gina) Tang, Ph.D.
Associate Professor
Electrical and Computer Engineering
Rowan University
tang@rowan.edu
856-256-5339

Web sites

http://www.rowan.edu/today/news/index/PR/2573

http://www.rowan.edu/today/news/index/FS/141