

2013 ACR Presidential Address

Making a Difference

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This year we come together to Chicago for ACR 2013. The theme of this year's conference is "Making a Difference."

The vision of the co-chairs when they were planning this conference was that we would be coming together to make a difference. But what does that mean? I think we all know what difference means. But it is one thing to know what it stands for, and another to try to explain it. So like what everyone does these days, I went online and looked up the word "difference" and found multiple definitions:

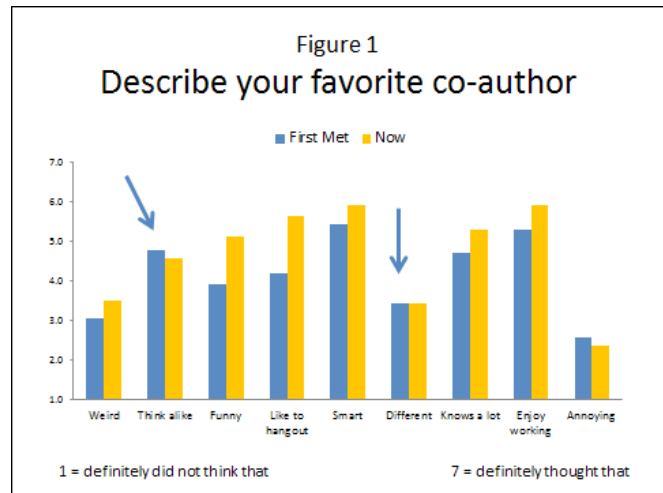
- The quality that makes one person or thing unlike another
- Something that people do not agree about – a disagreement, quarrel, dispute or controversy
- A point or way in which people or things are not the same
- A noticeable change or effect

Most of you would agree that "a noticeable change or effect" is what the co-chairs have in mind. But I also think that we could make a bigger difference as a field by leveraging our differences. Diversity is a good thing.

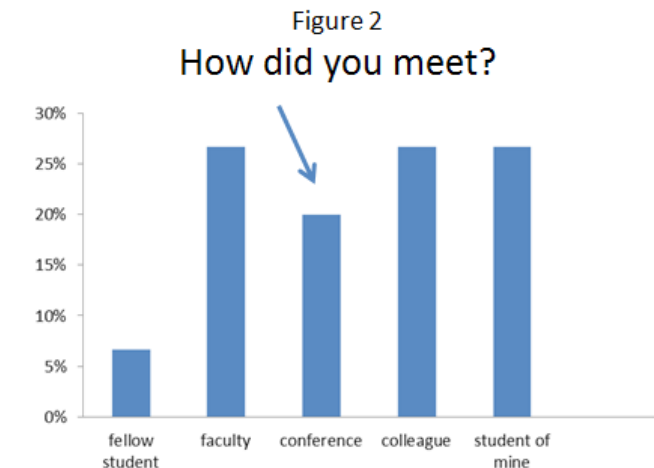
But is diversity really a good thing? Or is it just a politically correct stance to take? We all know the saying – birds of a feather flock together. Similar words of wisdom have been expressed by ancient philosophers starting with Aristotle (1934): "people love those who are like themselves" and Plato (1968) "similarity begets friendship;" as well as in Chinese proverbs: "the same kind gathers (物以類聚)."

Research as early as almost 100 years ago showed that school children who shared similar demographic characteristics such as age, sex, race or ethnicity were more likely to form playgroups or become good friends. We all know intuitively, as well as from research, that similarity attracts. People or things that are similar to us are aesthetically more pleasing. Similarity helps reduce uncertainty; and that is another reason why we like things that are familiar – as demonstrated by the robust mere exposure effect. Similarity facilitates communication; we can more easily communicate with others who share a common knowledge base, similar beliefs, or tastes. Similarity also engenders social cohesiveness. We can achieve greater consensus with people who are similar to us, and that makes us like them even more. It's an upward spiral.

Is similarity favored in academia? Does similarity work the same way in academia with finding co-authors? I did a mini survey with a small group of people from my cohort who were AMA Doctoral Consortium Fellows or MSI Young Scholars. I asked them to describe their most favorite co-author, what they thought of their co-author when they first met, and now. Not surprisingly, their attitude toward their favorite co-author grew over time. But the impression that they think alike and are not very different remained stable (Figure 1).



I also asked them to tell me where they met. The data suggest that favorite co-authors are likely ones who have the same training or share the same workplace culture (Figure 2).



In 1845, Samuel Morse sent the first electronic message "What had God wrought" from Washington DC to Baltimore, and declared putting an end to what he refers to as the "tyranny of distance." But it seems that even with the internet, email, and the dropbox that many of us use, the tyranny of distance still rules. And the conclusion one might draw from this very biased sample that "similarity attracts" provides more evidence to the "30-foot rule" phenomenon which says that people are most likely to work with others whose offices are within 30 feet of their own.

But while homophily is evident, there is also a need for heterophily – "love of the different." A co-author who is identical to us offers zero complementarity. There are good reasons that we like differences. Putting two different things together gives special ad-

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vantage – a term known as hybrid vigor (heterosis). We see this advantage in the plant kingdom, such as the tea rose, or the rutabaga; we also see this advantage in the animal kingdom, like the Savannah cat. And amongst people, working with someone who is different from us sparks creativity, even when what makes them different is that they are wrong!

I would like to describe a free association study that researchers from Berkeley conducted. They asked subjects to freely associate with the word “blue” – and the most common answer is “sky”. But in another condition, they added another task before this free association task. They showed subjects and a confederate color patches and asked them to name the color. When the confederate sees the blue color patch and calls out “blue,” the free association is still “sky”. But when the confederate sees the blue color patch and says “green,” the free association became more interesting; participants might say blue jazz, or blueberry pie.

So just being different could lead to good outcomes. But what about difference as in “something that people do not agree about – a disagreement, quarrel, dispute or controversy?” How can disagreement or quarrel lead to something good?

Let me tell you something about Alex Osborn. He is the founder of BBDO, one of the major ad agencies with offices in many cities around the world, including Chicago. He is also the author of “Your Creative Power” published in 1948. What made this book so special was Chapter 33 – “How to organize a squad to create ideas.” According to Osborn, people should get together and use the brain to storm a creative problem; that is, they come together and engage in a “brainstorm”. And brainstorming was central to BBDO’s success. At one of these brainstorming sessions, ten advertising executives were reported to have generated a total of 87 ideas for a new drug-store in 90 minutes, at the rate of almost one idea per minute. The most important rule that they had to follow, one that distinguishes brainstorming from other types of group activity, was there should be NO criticism, and NO negative comments. The idea is that if people are worried that their ideas might be ridiculed, the whole process would fall apart. So the gist of the instruction was - “Forget quality. Aim for quantity.” Brainstorming was an instant hit and Osborn became an influential business guru.

Now business guru may know how to make money, but most of them don’t know how to do good research. More than 50 years later, in 2004, the same researchers from Berkeley conducted another study that took place in two countries – US and France. Fifty-two teams of 5 female undergrads each were given 20 minutes to come up with as many solutions as possible to reduce traffic congestion in the San Francisco Bay Area. At the same time, six teams of male undergrads and 15 teams of female undergrads were tasked with solving a similar traffic congestion problem in Paris. The teams in each country were randomly assigned to one of three conditions. All participants were told: “most research and advice suggest that the best way to come up with good solutions is to come up with many solutions. Freewheeling is welcome; don’t be afraid to say anything that comes to mind.” Then participants in the brainstorming condition were given the standard brainstorming instruction: “*However, in addition, most studies suggest that you should rule out criticism. You should NOT criticize anyone else’s ideas.*” And those in the debate condition were told: “*However, in addition, most studies suggest that you should debate and even criticize each other’s ideas.*” And participants in the control condition were not given any further instruction.

The results were quite surprising. The brainstorming group performed only slightly better than the no instructions control group. The debate group was by far the most creative, generating 20% more ideas than the other two groups. This study shows that

ideas are not inhibited by debates and criticisms; but are instead stimulated by them.

Other evidence also suggests when people who think differently come together, good things happen. A study examining what makes Broadway musicals successful shows that the best teams were those with a mix of old and new talents and relationships. West Side Story is a good example. It had really famous producers and directors and choreographers like Jerome Robbins, Leonard Bernstein, Arthur Laurents. It also had a 25-year old lyricist who had never worked on Broadway musical before – his name? Stephen Sondheim.

What I would like to advocate is that different ways of thinking can enrich research – there is a yin-yang complementarity. Let’s consider promotion and prevention focus. Both are essential for survival, and yet seldom can we adopt both orientations at the same time. Wouldn’t it be nice if someone has what we lack watching our back? It’s the same with abstract/concrete thinking, or analytical/holistic thinking. I’m sure you could come up with more examples.

So having a diverse team of researchers does have distinct pros and cons – while the team may lose out on social cohesiveness, they win big on creativity, innovativeness, and impact! Let me share with you the results of a paper published in *Science* a few years ago on research productivity and impact (Wuchty, Jones & Uzzi 2007). The authors examined web of science data on 19.9 million papers and 2.1 million worldwide patents published between 1945 and 2006 and found that teams increasingly dominate solo authors in the production of knowledge. Team efforts in research are on the rise across virtually all fields—science and engineering, social sciences, patents, except in arts and humanities where it is fairly stable. Teams also produce more highly cited research than individuals, with this team advantage increasing over time. The most frequently cited studies used to be the product of a lone genius, like Einstein, or Darwin. This is no longer the case. Today, papers by multiple authors receive more than twice as many citations as single-authored papers. And within teams, the diversity advantage continues: between-school collaborations have a significant advantage over within-school collaborations in terms of high impact papers. That is, UBC-Duke collaboration trumps UBC-UBC collaboration or Duke-Duke collaboration. And it is not just cross-school collaborations getting more citations, cross-border or international collaborations also receive more citations than within-nation collaborations.

What we are observing with these cross-school or international collaborations may be similar to what happens to a particular plant species - cucurbita pepo. The scallop squash, pumpkin, zucchini, these are all different varieties of the same species. Different farmers grow it for different characteristics they value – so after 7000 years, we have many different varieties from the same species. By the same token, we may start with one idea, and different researchers with different interests will take that idea into different directions, and we end up having a much richer set of findings for that construct, each with its unique contributions.

You may ask: where do ideas come from? Maybe we could take a lesson from Steve Jobs. When he was running Pixar, he thought the headquarters must have an airy atrium. But an airy atrium is not enough. He also thought “everyone has to run into each other.” So he needed to force people to go to the atrium. He started with mailboxes, then meeting rooms, cafeteria, coffee bar, gift shop... they were all in the atrium. He also had the only set of bathrooms in the entire building there, although he was later forced to compromise and had a second set of bathrooms elsewhere.

By now, we know all the ingredients for high impact work... different people, from different schools, preferably from different countries, a space for people to run into each other, time and venue

to listen, chat, debate, and to share personal experience. And when we put all the ingredients together, that's ACR2013 in Chicago!

Let's take a look at the membership of ACR. In 1973, ACR had 411 members from 8 different countries (Canada 25, Denmark 1, Finland 1, France 2, Germany 1, Japan 1, Norway 3, USA 3). Then membership went up to 789 members from 19 countries in 1983 (Australia 8, Brazil 2, Canada 53, Denmark 3, Finland 3, France 6, Germany 15, Greece 1, Japan 4, Netherlands 7, Norway 3, Saudi Arabia 1, Spain 2, Sweden 2, Switzerland 3, United Kingdom 3, USA 672, Yugoslavia 1), 1549 members from 33 countries in 1994 (Australia 28, Austria 3, Bahrain 1, Belgium 3, Brazil 3, Canada 78, Denmark 8, Finland 11, France 15, Germany 21, Hong Kong 3, India 1, Israel 3, Italy 2, Japan 16, Korea 11, Netherlands 22, New Zealand 2, N Ireland 1, Norway 2, Poland 1, Portugal 1, Saudi Arabia 2, Scotland 1, Singapore 8, South Africa 1, Spain 5, Sweden 4, Taiwan 3, Thailand 1, Turkey 4, UK 17, USA 1278). And this year in 2013, we have 1668 members from 51 countries (Table 1)—a diverse group of individuals, all with a shared goal.

I am proud to say that the profile of my co-authors looks somewhat like the ACR membership profile: 31 from North America, 10 from Asia, 2 from Australia, 2 from Europe, and 4 from the Middle East. They are the people who have taught me how to think differently to make a difference. I am thankful to every one of them.

Here's what I would like all of you to do. Before Saturday is over, talk to at least 3 people whom you did not know prior to this conference. You may find a collaborator for some exciting new research that you could submit to a new outlet.

Speaking of new outlet, let me take this opportunity to make an exciting announcement: The ACR Board has voted yesterday to launch a new journal. It is official. This decision was based on the findings and recommendations of three taskforces and many meetings and deliberate discussions. The focus of the ACR journal (name to be determined) is on substantive contributions. The issues will be themed – like special issues. Some of them will include commentaries. There are a lot of details that need to be ironed out, but please stay tuned for further announcements.

Before I leave this podium, I would like to acknowledge and express my gratitude to three special people who have made a difference in my life. In their different ways, they have guided me, supported me, and inspired me. Without them, I would not have been here today speaking to you. They are Andy Mitchell, my advisor, and Brian Sternthal and Alice Tybout, my colleagues at Northwestern. I thank them.

And I thank all of you. Have a great conference!

Table 1: ACR Membership in 2013

North America		Europe		Asia-Pacific	
Canada	121	Norway	10	Australia	36
Mexico	9	Poland	3	China	15
United States	968	Portugal	2	Hong Kong (China)	31
		Romania	1	India	6
Europe		Spain	9	Indonesia	4
Austria	14	Sweden	12	Japan	35
Belgium	24	Switzerland	17	Kazakhstan	1
Croatia	1	Turkey	15	Macao (China)	4
Denmark	6	United Kingdom	71	Malaysia	3
European Union	1			New Zealand	14
Finland	5	Middle East		Pakistan	1
France	49	Israel	10	Singapore	16
Germany	28	UAE	3	South Korea	15
Greece	2	Saudi Arabia	1	Taiwan	14
Ireland	4			Thailand	3
Italy	9	South America			
Lithuania	1	Brazil	8	Africa	
Monaco	1	Argentina	2	Morocco	1
Netherlands	34	Colombia	2	South Africa	6
Netherlands Antilles	1	Chile	1		