

## Collaborative Research = Collaborative Learning: A Field Trip to the National Archives and the Search for Solomon Asch

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[Return to Contents Page](#)

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### Abstract

This readily accessible treasure house of American history offers opportunities and surprises for faculty and students in any field.

Fostering undergraduate research has increasingly become a focus of four-year institutions. Thus, given the maturity and capabilities of a substantial number of our community college students, we VCCS faculty can help our students prepare for the baccalaureate by providing them with opportunities for actual research.

How can we do this? In my own case, my Tidewater CC honors students (enrolled in "Research Methods for the Behavioral Sciences I & II") began with historical research in the standard scientific literature on the topics of independence and conformity. They derived hypotheses from that approach and tested them empirically. Since these data raised issues and contradictions that were unanswered in the literature, we found it necessary to dig deeper into primary, unpublished documents at the National Archives.

It's been quite an adventure! Let me give you some personal sense of our search-and-discovery mission – and then work back to the evidence and unresolved issues that drove our research over the past five years....

### On-Location Collaboration

My students and I are on the second floor of the National Archives and Records Administration II in College Park, Maryland. We are interested in the late 1940s, post-war America. All around us are old brown boxes, filled to bursting with countless pieces of paper that document travel orders, meeting notices, equipment purchases, security clearances, contract records, budget analyses, employment applications, operating procedures, scientific conferences, university requests for funding (or their bills) . . . and more!

I experience déjà vu. As a child of the '50s, I can still recall the sweet pungent smell of some unknown hydrocarbon wafting from the "ditto" tests and worksheets Sister Irene gave us in the first grade; and I remember my Mom banging out drafts and carbon copies on an old Underwood. True, the scent has long evaporated from these documents, but the purple ink and the blurred print of carbon copies are more than sufficient for what we psychologists call redintegrative memories – those personal reminiscences, which, even if seldom visited, can be vividly elicited by a single cue.

We labor in unindexed, uncatalogued correspondence records of the Office of Naval Research, 1946-1950. It is a dry task, both in terms of the brittle paper (as its microscopic fragments fill our nasal passages) and also because of the ordinary nature of the contents. Most are written in highly succinct "militarese" that often leaves much to the imagination. The obscure references are clearly intentional since so many are marked "Restricted" or "Confidential," and there are disconcerting breaks in the blue-stamped sequence numbers where a cover memo refers to a report that is missing.

Our tedium is relieved by the two-story bank of windows that allows us a view of nearby trees and the sharp contrast of morning sunlight that fills the large open room of desks and photocopiers. The desks, seating four people, are often marked with team signs since teams can request many more documents at one time than a single

researcher. The four of us quickly sign up as the “Tidewater CC” team.

Most researchers do not face our problem, as so many of the records are inventoried, indexed, catalogued, and described so precisely that a search process can be well targeted and highly efficient. In our case, the chore of looking at every piece of paper in our boxes is eased by our collective attitude: our optimism and excitement is akin to that of the 49ers during the California “Gold Rush.” We too know the chance of hitting the “mother lode” is unlikely, but still we occasionally see bright little “specks” glimmering in our “pans.”

As someone who emphasizes writing skills to my students, I am immediately struck by the apparently casual nature of the meticulous spelling and grammar we witness in these documents. Even typos on the thin, almost transparent sheets of carbon copies have been carefully corrected in hand-written black ink – no pencil or ballpoint mark-ups here, and no scratched-out words either. The clerks and secretaries who prepared the countless memos and letters obviously knew the language well.

Most of what we see has nothing to do with our project. Yet, there is other “gold dust” here which renews our enthusiasm to press on to another page: an unsigned copy of a letter from Admiral Nimitz to General Eisenhower, a vague reference to “the negro problem,” a mention of research on cryogenics, or the post-war tests of U.S. versions of V-1 rockets. We feel an eerie sense of history-in-the-making as we hold a letter signed by Edward Teller and recall the development of nuclear weapons, the “Arms Race,” and the Cold War. Correspondence signed by Curtis LeMay reminds us of the Bay of Pigs and his vice presidential run with George Wallace. A translation of the log of the *Prinz Eugen* bears stark witness to the *Bismarck*’s sinking of the *Hood* with one word: “Excellent!”

Some of the most interesting discoveries come from our synthesis of the tidbits. We talk across the table: “What is Operation Paperclip?” (a question raised by a one-sentence reference). A little later, one of us locates a brief reference to a “shipment” of German scientists. Several thousand sheets later we find a document on how to handle alien scientists. If they were nominal Nazis, that was one thing; if they were active Nazis or proponents of communism or militarism, they were to be handled differently. Eventually, there were lists of these alien scientists and the association to “Operation Paperclip” becomes obvious.

Along with the reports on European science from the Office of Naval Research (ONR) desk in the Embassy in London, the documents on scientific conferences in France and the Netherlands, and Soviet accusations of the “militarization of U.S. science,” the singular nature of the Nation’s intent becomes clear to us researchers. To quote Jefferson’s adaptation of Bacon, “Knowledge is power, knowledge is comfort, knowledge is safety.” Just by looking at a single research arm of the post-war government, we get a clear picture that America would never be so unprepared again, and that scientific knowledge would be the nation’s sword and shield. We are witnessing a portion of the birth throes of the “Age of Information.”

Sometimes we find our own modern experiences so strongly juxtaposed against the statements in the documents that our experience can only be described as weird. For example, we know General Mills for its production of Wheaties and Coco-Puffs, and Jean Luc Piccard as the Captain of the *Starship Enterprise*. Yet, here we see correspondence between Jean and Jeanette Piccard of General Mills and ONR contract monitors – and it has nothing to do with breakfast cereals; General Mills was manufacturing high-altitude balloons for the Navy. The Piccard family already had established its preeminence in high-altitude balloon exploration and, in the 1930s, Jeanette had become known as the “first woman in space.” Among the exchanges on test flights and accidents (in which, at least, the injuries suffered were only serious and not fatal), it was clear that Jean Piccard was going to see to it that he accompanied naval officer Spicer on the two-man team that would attempt to set a new high-altitude record. He considered passage on the history-making flight part of his salary.

## The Background of Our Research

Of course, we did not travel to College Park just for the fun of it. My honors research students and I had conducted a replication of Solomon E. Asch’s classic research on independence and conformity, and had obtained results differing from his and scores of replication studies over the past half-century. While Asch’s (1951, 1952a, 1952b, 1955, 1956) research is commonly described in virtually every introductory and social psychology textbook, we came to realize that many details had never been reported in the scientific literature or elsewhere.

In Solomon’s study, a person sits in the midst of a group in a perception experiment and judges which of three lines matches the length of a standard line. From his control condition, Asch had demonstrated that the 18 comparisons constituted “an utterly clear perceptual fact” (Asch, 1951, p. 179). However, in the experimental group pressure condition, the group reports accurately on only six trials, but they unanimously give an obviously incorrect

judgment on the twelve critical trials. The question raised is this: Will the subject yield to group pressure or rely on the clear evidence of his senses?

Asch found most of the true subjects' estimates were accurate; surprisingly though, 75% of the subjects yielded to the unanimous and wrong group judgments at least once on the 12 critical trials.

In fact, over 150 replications have focused on the group pressure effect, often modifying Asch's experimental paradigm in a variety of ways. From these studies, subsequent investigators have concluded, for example, that women are more conforming than men or that members of collectivist societies are more conforming than people from cultures emphasizing individualism (e.g., Bond & Smith, 1996).

Unfortunately, few replications have focused on the other critical feature of Asch's paradigm – stimulus clarity; only about two dozen U.S. studies have run control conditions to verify stimulus clarity. Typically, stimulus clarity is treated as common knowledge, and even the few control replications report this information in an incomplete or haphazard manner.

In our replication, not only did we find that community college women were not more conforming than comparable men, but also that errors in the group pressure condition did not differ significantly from errors in the male and female control conditions!

Why did our results contradict the literature? Could it be that our stimuli were less clear for our subjects? After all, Asch found that as stimulus clarity diminishes, conformity increases! So, did our subjects sit too far away from the stimulus array? Did we design our stimuli incorrectly? Why were the stimuli less clear in 1999 for our community college students than they were for Asch's white male college undergraduates in the late 1940s?

Asch did not report his subject-to-stimulus viewing distance. Also, while he describes the construction of the standard-line and comparison-lines cards in detail, his description of the distances among the three comparison lines is open to alternative interpretations.

Obviously, these issues could have been easily resolved by direct comparison to his materials and working notes. Unfortunately, Asch's files were destroyed in a fire at Swarthmore College while he was away on sabbatical, and he died in 1996.

So, we surveyed several of his colleagues and former students and then queried the Library of Congress, the Smithsonian Institution, the Archives of the History of American Psychology, and other organizations – all to no avail.

After several months, we tried the ONR, Asch's contracting agency for the main thrust of his research, knowing that he must have been funded by the ONR between 1946 and 1950 (Darley, 1951). An ONR researcher suggested that, since ONR's Medicine and Health Branch had overseen the study, we should contact Mr. Barry Zerby at the National Archives, where these documents had recently been deposited. Perhaps Asch's interim and final reports were in ONR's Terminated Medical Studies for our time period. For novices in historical research like ourselves, the help of an expert like Barry Zerby proved to be extremely valuable.

In January 2001, two of my honors research students, Lynn McGeein and Karen Craig, traveled to College Park at their own expense. Facing them, with Mr. Zerby's assistance, were the eight boxes of ONR Terminated Medical Studies 1946-1950, an estimated 200,000 pages! Labeled by subject, it was several hours later that Lynn and Karen were able to conclude that most of these studies dealt with gas masks, effects of high altitude flight, g forces, sunscreen trials, and the like.

Mr. Zerby had also written us that they had recently received sixty additional unindexed, unorganized boxes, 1947-1950 from ONR, far exceeding 200,000 pages. Finding anything about Asch, he believed, would be like looking for the proverbial "needle in a haystack"... and he was right!

Lynn and Karen had only enough time left to request two of those boxes in the last draw of the day. All they had to go on was a list of scientists and ONR contractors and Advisory Panel members which, according to the book in which Asch's study was reported (Guetzkow, 1951), were variously studying group processes and leadership. Late in the day the "flecks" of "gold dust" appeared in a letter to the president of MIT noting the death of Kurt Lewin, one of America's pioneer social psychologists and a member of the Advisory Panel which would have overseen Asch's work. It mentioned ONR's desire to continue its cooperation with researchers at MIT and an impending visit by the ONR

lead, Capt. James Macmillan – who also was listed in Guetzkow's book!

Lynn, Karen and I were "itchy" to get back to those boxes! It would be August 2002 before we could. Thanks to family members, who provided overnight lodging; the VCCS Summer Stipend (which freed up some of my time) <sup>[1]</sup>, and the willingness of the participants to bear travel expenses, we made our second visit. Karen, current Honors students Lauren Burt and Sulaiman Bah, my son Andrew O'Brien (a junior at William and Mary), and I sifted through eight of the sixty boxes over the next nine hours.

## Results and Lessons Learned

Did we find anything on Asch? No, sad to say! The good news is we turned up more familiar names indicating we were on the right track: Capt. Macmillan appeared often; there were references to Guetzkow's contract for work on effective conferences; Lowell Kelley was reviewing proposals as the first chair of the ONR Advisory Panel; and clearly Stogdill's work on leadership had been contracted and was in progress.

We were also able to "ball-park" the answer to another important issue relevant to Asch. It is clear that conformity has declined in the U.S. (Bond & Smith, 1996), and some have argued that conformity was higher in Asch's time because it reflected U.S. culture during the period of McCarthyism (Larsen, 1990). McCarthy came to national prominence on the Senate Committee on Investigations in 1953. His earliest congressional treatment of communists within the government occurred on February 20, 1950 – just six months prior to the Dearborn conference at which Asch first reported his data (see Guetzkow, 1951). Therefore, if McCarthyism ever defined an American cultural period, it would appear to have exerted its effects too late to have been an adequate explanation for Asch's findings.

Nevertheless, it has been an exciting quest! Karen, Lynn, and I – and no doubt several other students – hope to attack the next bunch of boxes soon. Besides the privilege of seeing (for the first time in 50 years) the day-to-day documents which ultimately shaped our nation as we know it, we may yet clarify some of the most fundamental issues in one of the most important topics in social psychology. <sup>[2]</sup>

Of all professors, historians are no doubt the most familiar with the kind of detailed information and historical context raised by the issues my students and I are pursuing. Yet, much the same is true for my colleagues in disciplines such as political science, international relations, journalism, religion, archaeology, geography, and philosophy. In retrospect, I should not have been surprised at the wealth of information on life and physical sciences, especially in the files of military agencies.

With its vast and varied holdings, the National Archives is sure to be of interest and benefit to researchers in most disciplines. It is both a treasure house and, amazingly, an underused resource. You will also find it to be a uniquely rich place to foster your students' research skills and to introduce them to the achievement and excitement of discovery.

## Planning a Visit

If you plan to visit the Archives, first go to their website (<http://www.nara.gov>) for their rules and expectations. I advise arriving promptly at 8:30 a.m. (parking is free, but beware the DC-area traffic). First-time scholars must go to the computers in the registration room on the first floor (Room 1000) and complete the form from which photo IDs are produced (good for future visits, too). Although the Archives staff will permit you to bring in laptops, approved scanners, cameras, and the like, they prohibit bags, boxes, paper, or pens. (If you do bring in papers or books, each must be stamped upon entry and inspected upon exit.) Also, you may request materials during the week at the scheduled pull times: 9:30, 10:30, 11:30, 1:30 and 3:30. Although photocopies are fifteen cents, bring \$1.00 bills, as you won't need change to electronically recharge a debit card you can get from the cashier on the first floor.

From the Archive's website, you'll also get Monday-Saturday hours, prescheduled pull information, a local map, and schedules for the Metro/bus system and the free Saturday researcher shuttle bus. Before you go, if you know the records you want, order a draw by phone and they'll be waiting for you.

Finally, should you find anything about Solomon E. Asch during your research, please remember us!

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[2] Psychologists and sociologists interested in our empirical program may refer to the addendum at the end of the "References" section entitled "*Virginia Journal of Science Abstracts*." In these sources, you will find summaries of 4 papers and a 4-paper symposium describing results from multi-year, multi-institutional empirical protocols. There are surprising findings on stimulus clarity – an essential feature of Asch-type paradigms. A new explanation for the consistent sex difference findings will be available on the Program CD for the Annual Meeting of the American Association for the Advancement of Science in February 2004.

## References

- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, Leadership and Men: Research in Human Relations* (pp. 177-190). Pittsburgh: Carnegie Press.
- Asch, S. E. (1952a). Effects of group pressure upon the modification and distortion of judgments. In G. E. Swanson, T. M. Newcomb, & E. L. Hartley (Eds.), *Readings in Social Psychology* (Rev. ed., pp. 2-11). New York: Holt.
- Asch, S. E. (1952b). Group factors in the modification and distortion of judgments (Chapter 16). *Social Psychology* (pp. 450-501). New York: Prentice-Hall.
- Asch, S. E. (1955). Opinions and social pressure. *Scientific American*, 193 (5), 31-35.
- Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, 70 (9), Whole No. 416, 1 – 70.
- Bond, R. and P. B. Smith (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin*, 119 (1), 111-137.
- Darley, J.G. (1951). Five years of social science research: Retrospect and prospect (pp. 3-15). In H. Guetzkow (Ed.) *Groups, Leadership and Men: Research in Human Relations*. Pittsburgh: Carnegie Press.
- 4-Paper Symposium (2003): ...“An Utterly Clear Perceptual Fact”... A Progress Report on Stimulus Clarity Research in the S. E. Asch (1956) Independence-Conformity Paradigm. *Virginia Journal of Science*, 54 (2), 107-108:
1. Burt, L. K., Clifford, C. L., Martin, E. S., Lentz, G. P., Wilmoth, B. A., Freeman, E., Atwell, A. L., Bah, S. T., Oeming, C.E. & O'Brien, J. P. Asch and stimulus clarity: The problem, protocol, and method.
  2. Lentz, G. P., Martin, E. S., Bah, S. T., Atwell, A. L., Burt, L. K., Wilmoth, B. A., Oeming, C.E., Clifford, C. L., Freeman, E. & O'Brien, J. P. An investigation of control conditions in Asch-type experiments: IV.
  3. Atwell, A. L., Wilmoth, B. A., Oeming, C.E., Lentz, G. P., Martin, E. S., Burt, L. K., Clifford, C. L., Bah, S. T., Freeman, E. & O'Brien, J. P. Implications for theory and research.

4. Bah, S. T., Isler, N. L., Clouser, N. A., Atwell, A. L., Lentz, G. P., Martin, E. S., Burt, L. K., Clifford, C. L., Wilmoth, B. A., Freeman, E., & Oeming, C.E. O'Brien, J. P. Ethnicity in Asch control replications: African-American peer experimenters and community college participants.

Guetzkow, H. (Ed.). (1951). *Groups, Leadership and Men: Research in Human Relations*. Pittsburgh: Carnegie Press.

Herrera, K. E., Mattingly, T. E., Hannah, P. T. & O'Brien, J. P. (2000). An investigation of control conditions in Asch-type experiments: I. *Virginia Journal of Science*, 51 (2), 132.

Isler, N. L., Clouser, N. A. & O'Brien, J. P. (2002). An investigation of control conditions in Asch-type experiments: III. *Virginia Journal of Science*, 53 (2), 107.

Larsen, K. S. (1990). The Asch conformity experiment: Replication and transhistorical comparisons. *Handbook of Replication Research in the Behavioral and Social Sciences*, special issue of *Journal of Social Behavior and Personality*, 5, 163-168.

McGeein, L. M., Craig, K. P. & O'Brien, J. P. (2001). An investigation of control conditions in Asch-type experiments: II. *Virginia Journal of Science*, 52 (2), 127-128.

Schwabenbauer, J. A., Schwabenbauer, A. L., Larkin, C. A. & O'Brien, J. P. (1999). A replication of Asch and Larsen with high fidelity controls: No differences in male and female conformity. *Virginia Journal of Science*, 50 (2), 178.

*Virginia Journal of Science Abstracts* (See footnote 2.)

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[Return to Contents Page](#)