

Academic concept inbreeding, failure of interbreeding, and its remedy by outbreeding

1. Inbreeding

Recently this author received several letters with regard to *intra*-disciplinary and *intra-subdisciplinary* inbreeding in North American social sciences and psychology. Professor Bernhard Wilpert, currently the President of the International Association of Applied Psychology, wrote to me: "I like your metaphor of the North American psychology as a big island separated from other disciplines. I have frequently commented on my North American colleagues' failure to even take notice of publications from outside the USA even if they are in English." Professor Geert Hofstede, whose work is widely known in international psychology, wrote to me: "I always had the greatest trouble in getting my manuscripts accepted by North American journals. Recently two of my very good manuscripts were rejected: one by the *Journal of Applied Psychology*; and the other by the *Academy of Management Journal*. Both manuscripts are now being published in Europe. My diagnosis is that most of North American social sciences is conducted by in-group persons who read only one another's work and cite one another. There is no conscience of belonging to a borderless crowd of humans who try to explore the same social reality." Professor Wendell Bell of sociology (emeritus) at Yale University wrote to me "As you know, sociology in the USA is in a state of apparent chaotic fragmentation at the moment. I am hopeful that some order will develop, but it is not entirely clear at the moment what it will be based on."

I have worked in the USA for 30 years and in Europe for 6 years, and am familiar with the differences between North America and Europe in their social sciences and psychology. But even so, I was recently shocked by a few points in referees' comments by North American psychologists, which made me realize that they were totally unfamiliar with what went on outside the North American psychology. As examples I would like to mention two points. The first

is that some words widely used outside North American psychology were perceived as my "esoteric neologism." A more serious example is that on the concept of causal loops, which had been widely used in many disciplines since the beginning of this century, one referee commented "whether causal loops can amplify changes, whether heterogeneity increases or decreases over time, are so abstract and impressionistic that they are nearly impossible to adjutate. Unfortunately there is little or no evidence."

Change-amplifying causal loops (often called "positive feedback") were first used: in radio oscillators (electromagnetic wave generators) in 1910 (Milsum [6]); genetics in 1931 (Wright [9,10]), economics in 1943 (Myrdal [7,8]), and were formulated by Maruyama as the "Second Cybernetics: Deviation-amplifying Mutual Causal Processes" (Maruyama [4, 5]), and thereafter were used widely in sociology (Buckley [1]), biology, cancer research, psychiatry and several other fields. According to *Citation Classic's* weekly *Current Contents* (22 February 1988), Maruyama's "Second Cybernetics" had been cited in more than 230 publications in many disciplines. Yet in North American psychology of today, it is virtually unknown. This is an example of inbreeding which insulates researchers from other disciplines and sub-disciplines.

Inbreeding occurred in two forms: experience inbreeding; and knowledge inbreeding. In the former, each researcher stayed within a narrowing range of activities due to various reasons including accreditation, professional certification, and animosity between closely related but rival factions: if one worked in two rival camps, one was likely to be considered as enemy by both sides. As for knowledge inbreeding, the main culprit was what amounted to a "local contents requirement" imposed by journal editors and conference organizing committees. When a firm from Country A assembles cars in Country B, it may be required that a certain percentage of the parts comes from Coun-

try B. This is called “local contents requirement” and is a tool for protectionism. It is one of the non-tariff barriers to free market trade. When an author writes a manuscript for a journal in a discipline or subdiscipline, it is usually required that he/she reviews others’ relevant works in that field. This is a sensible requirement. But it becomes a non-tariff barrier in interdisciplinary communication (Maruyama [4]). For example, an engineer may have something useful to say about how to facilitate coordination among assembly line workers. However, in order for him/her to write an article in a management journal, he/she is required to review some management theories and to demonstrate that his/her idea has advantages over existing management theories. The requirement may sound reasonable to the insiders. But for an outsider, it may take months to scan and identify relevant theories even before reviewing them. He/she is likely to have no time for such a task, and even if he/she does, the needed books and articles may not be readily available at his/her place of work. The probability of his/her writing a manuscript to the satisfaction of the editor of the journal is very low. But even if the editor sees the usefulness of the manuscript without review of other theories, the manuscript has to go through the referee process, and the referees would be unhappy if their favorite theories are not mentioned in the manuscript. Some editors are flexible and put the manuscript in the category of “comments” which do not require the referee process. But the editor cannot print a full-length manuscript as a comment. Not everything can go through the backdoor. Some interdisciplinary-sounding journals exist with titles such as economic psychology, but they tend to be *subdisciplinary* with narrower requirements. Some solutions are: (a) to create a new interdisciplinary section in each journal, where full-length articles by outsiders can be printed without having to meet the local contents requirement. This section serves as a “free trade zone” (tax-free and duty-free zone) of concepts and research findings; (b) to use outside referees.

There are some other causes of inbreeding. An example is monopolistic dominance by a theory or methodology in some disciplines. In a job-scarce situation, a sure way to secure employment and promotion is to adhere to the dominant theory, and the best strategy to obtain a research grant is to use the dominant methodology. There are many similarities between grantmen in North America and managers in communist systems. A good manager in a communist

system is the one skilled at obtaining allocations, not the one who can maximize profit. Allocations do not have to produce profit. They do not even have to be repaid. If you ran out of allocations, you request more allocations. Similarly research grants in North America do not have to produce profit. They do not have to be repaid. If you ran out of grants, you apply for more grants. Even now, many of the Russian enterprises regard foreign joint-venture partners as grant-giving foundations: They do not produce profit; they do not repay; they keep requesting more investments. Communist managers had to show allegiance to a political ideology. North American grantmen have to show allegiance to a dominant theory or methodology. We must institute academic anti-trust law to prevent monopoly by a dominant theory or methodology (Maruyama [5]).

2. Interbreeding and outbreeding

In the 1950s and 1960s in North America, we saw a surge of interdisciplinary waves. Thinktanks, interdepartmental and extradepartmental institutes, joint appointments and degree programs became fashionable. The prevailing principles were: (1) to collect specialists from several fields together to discuss a topic or a problem; (2) to promote infusion of extradepartmental ideas by hiring persons of other departments part-time or full-time; (3) to offer interdepartmental degree programs by combining courses from many departments; (4) to set up institutes or departments to study generalized theories. Books were written with the same principles.

However, most of them ended up with either a haphazard collage or a bazaar shopping for hunting and gathering of preconceived ideas to reinforce what had been inbred instead of innovative cultivation of new species of ideas: scholars acted like nomads rather than farmers or genetic engineers. Therefore these activities left intact the ingroup-centered way of thinking. In case of books and degree programs, the situation was worse. Each chapter or each course presented discipline-specific contents, and the task of interrelating various chapters and courses was left to the readers and students. As for general theorists, many of them lacked the mentality for specifics. They did not want to get their feet wet and hands dirty. They tended to look for superficial analogy and far-fetched similarities with apriori assumption of universality, but without appreciable knowledge of or interest in

the specifics, blind to the existence, necessity and desirability of heterogeneity, and being prone to extrapolation, arm-chair generalization or vague abstraction without reality base. They claimed to counteract the reductionism of specialists, but fell into a reductionism or another sort: homogenization, oversimplification or wishful normativism.

An alternative is outbreeding which consists in going outside the ingroup and *immerse oneself* in the concepts, theories and methodologies of several other disciplines. Due to various circumstances, the author of this paper, who was initially a mathematician, outbred in several disciplines and in several cultures by being on the faculty in: psychology (University of California Berkeley, Stanford University); anthropology (University of Illinois Urbana, Uppsala Universitet in Sweden); sociology (University of Oregon); architecture (University of Illinois Urbana); international business (Université de Montpellier in France, University of California Los Angeles, National University of Singapore, Aoyama Gakuin University in Tokyo); and as consultant in urban planning and community design (NASA, USA Corps of Engineers, Canadian Government); mental hygiene (California State Department of Mental Hygiene), technology (OECD); international business (Volvo, Michelin, Monsanto, USA Department of Commerce, MITI of Japan). The research results of my outbreeding were reported in more than 170 publications, published mostly in Europe. However, I am constantly faced with resistance from North American journals,

for the same reason that was stated in letters from professors Wilpert and Hofstede as quoted at the beginning of this paper.

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