The Odd Couple: Strains in Science, Engineering Academies

H. L. Mencken wrote that when spouses discuss their relationship they are really giving testimony at a coroner's inquest. It is not yet certain whether this observation is relevant to the morganatic union of the National Academy of Sciences (NAS) and its separate but unequal affiliate, the National Academy of Engineering (NAE). But the two prestigious institutions have not been getting on well, and officials acknowledge that the future of the relationship is being actively examined by both, though they are discreet about the specific causes of disharmony.

That strains have developed is no surprise, for the creation of NAE in 1964 and its simultaneous association with the century-old NAS were preceded by a rough courtship, with many publicly voiced misgivings about the compatibility of the two professions. The genesis of NAE was in the dissatisfaction of some engineers with the amount of recognition given their profession by NAS, which holds a unique congressional charter to honor scientific achievement and provide advice to the federal government. Founded by a group in which fundamental scientists predominated, NAS evolved as an institution that drew most of its members from academic science. Some recognition was given to technological achievement through the admission of engineers and the creation of an engineering division in the National Research Council, which is the principal working—as distinguished from honorary—arm of NAS. But by the early 1960's, engineers comprised less than 10 percent of the Academy's approximately 600 members, and some prominent members of the engineering profession began to talk of seeking a congressional charter to establish their own academy.

This prospect was not looked upon favorably by NAS leaders, who at that time were seeking to enlarge the influence of their organization in government affairs. It was argued by some that NAS should respond by admitting more engineers. Others pointed out, however, that, while the tradition of scientific publication makes it relatively easy to identify scientific talent, contemporary engineering frequently involves large team efforts in which it is difficult to apportion credit for the final result. There were also some fears within NAS that, since engineers are more numerous than scientists, they might eventually swamp the science academy. (NAS currently has 870 members; NAE, 327. There are 32 who are members of both academies.)

What finally evolved as an attempted solution was an agreement by which a National Academy of Engineering would be created under the NAS charter. The rationale was that this would promote cooperation between the two professions, rather than competition to provide advice to government agencies. It was also felt that with NAS already set up in large Washington headquarters, it would be simpler and cheaper for NAE to move in and share facilities rather than to set up its own headquarters. Finally, it was probably also the case that NAS had overestimated the intensity and scale of the engineers' desire to have an academy, and, when the few engineers who were agitating for it were confronted by what NAS considered a shrewdly conceived scheme to de-energize a potential threat, the engineers figured, Why not?

Under the arrangement that went into effect with the creation of NAE in 1964, the engineers were to have their own bylaws, governing bodies, and criteria for admission. But they were not to be sovereign tenants on the NAS premises. Legally, NAE's existence stemmed exclusively from the NAS charter. The president of the science academy was given an ex officio place on the NAE governing council and its executive committee, though reciprocity was not accorded the NAE president in regard to NAS governing organs. Cooperation between the two academies was to be guided by a joint board, with membership equally divided. And it is on this basis that the two academies have been coexisting over the past 6 years.

Just what it is that has been agitating them is difficult to discern, since both organizations place a high value on maintaining a decorous public appearance. But one hears of a variety of squabbles, with subjects ranging from the design of letterheads to the apportionment of finances between the two organizations. Since both are primarily in the business of seeking to enlighten the public process with sage advice, solicited and unsolicited, there has, perhaps inevitably, been some backbiting about the quality of their respective advice. Some engineers contend that, since their scientific colleagues are mainly campus-based, they are remote from economic realities that figure large in many of the urban and environmental problems that both academies have been studying for one or another government agency. On the other hand, some scientists feel that NAE has been diluting the quality of academy membership by admitting industrial executives who are somewhat short of being estimable engineers. "It's getting to be a club for industrial vice presidents," said one NAS man. Another said, "You can tell when their council is having a meeting. Lots of corporate limousines are parked around the building."

Both organizations are now said to be determined to redefine the relationship, but the possibility of a complete split is spoken of as very real. On both sides, the general opinion is that within the next year, the two academies will settle down to a long-term system of togetherness or go their separate ways. In either case, it is not likely that the engineers will accept the degree of submergence that their scientist colleagues would like to impose on them. One indication of this is to be seen in the fact that the presidency of NAE, held by Clarence H. Linder, a retired GE vice president, has evolved into a nearly full-time job. Linder, like his NAS counterpart, Philip Handler, takes an activist view of the position.

Medical men, it might be noted, have for some time been seeking the establishment of a National Academy of Medicine. The best offer they got from NAS (and it's one they have accepted) is an invitation to come in under the NAS charter—as the Institute of Medicine of the National Academy of Sciences. One NAS official said, "We've learned a lesson. No more academies."

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