Have You Ever Wondered About The Engineer’s Mysterious “Feel” For A Problem?

I first encountered the engineer’s so-called “feel” for a technical problem when I started out as a graduate student. But, against all professorial advice, I instantly committed myself to a life-long study of computer-aided design and optimization technology, then widely considered (by engineers) contrary to both respectable mathematical theory and sound engineering practice. Now, almost half a century after my bachelor’s degree, I find that I can explain the engineer’s mysterious “feel” as well as the motivations of those who discouraged me.

Luckily I persevered, with the encouragement of professionals and friends as well as co-workers more brilliant than I deserved. I have always been guided by two principles. The first is by H.J. Eysenck, ca. 1960s: “If we make up an ad hoc hypothesis for every new case . . . then we shall never go beyond the present position where we can explain everything and predict nothing.” The second is my own: “Proceeding in a direction not sanctioned by my peers has always proved tough, but the results achieved have almost always been worth the effort.” Thus, I caution against “experts” who claim to see no future in your proposed work; I recommend you not take that well-trodden path to be instantly understood and accepted. Instead, I encourage you to follow your pioneering instinct even if you find yourself initially ridiculed or rejected.