-Are Engineers People?

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We are living today in the age of supersonic planes, intercontinental missiles, subpolar atomic submarines, beep-beeping satellites, and fearful hydrogen bombs. All of these things have brought to the public's attention that inscrutable group of individuals known as engineers—a group that I am, for better or worse, a member of. To some they seem like superhuman miracle men, while to others they appear more like subhuman automatons.

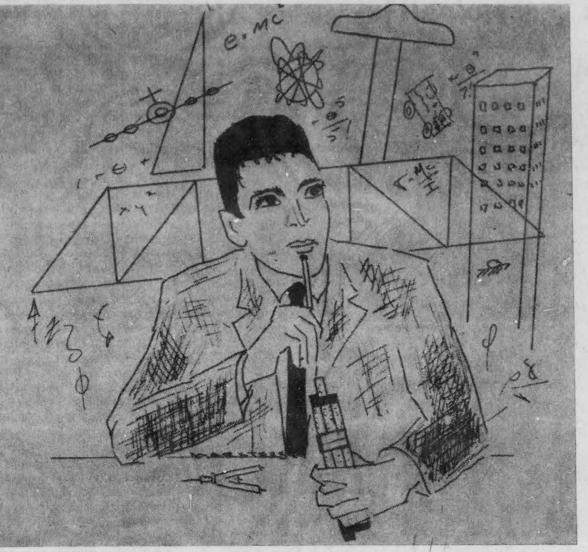
This latter view is probably most often held by those who are closely associated with them in their work. A few years back, for example, there was a cartoon being circulated through many of the engineering departments of the country. It showed a hairy hulk, something between a Neanderthal man and an ape, writing involved equations on the wall of a prehistoric cave while nearby lay a crude slide rule made of bones. The caption of the cartoon said, "Engineers Are People!" One morning we came to work to find this cartoon posted on the bulletin board with the added comment, "How can you be This seems to be the prevailsure?" ing opinion of many people toward engineers.

At meetings and social gatherings, for example, I often find my friends and acquaintances making good-na-tured but barbed references to the idiosyncrasies of engineers. Once at a business luncheon, after several such remarks, I confronted the men with a direct question.

"All right, let's lay it on the table. What do you fellows think is wrong with the typical engineer?"

Some of them later admitted that nism toward the niceties of social they had not believed that an engineer could really be interested in their views. Finally convinced that I was serious, they began a recital of stored-up grievances.

of a successful sporting goods store, "they won't concede that the other fellow knows anything, even about his own work. The average engineer comes into my place and right away starts talking about what an easy racket I've got. He complains about the high markup on hunting equipment, and then when I try to explain



As a result of this discussion, I "To begin with," said the owner gists, other engineers, their wives, "to begin with," said the owner their friends (they do have some), and with the general public. Reluctantly, I am forced to admit that there is a serious doubt as to whether ciples."

might start a little place like mine, with, emotionally warm, and inter- do so."

even exhibited a pugnacious antago- of them. He is apt to feel that he man element. The almost mathemati-

plaint that her household could be would "apply a few engineering prin-

idiosyncrasies now seem to me to be a conspiracy to prevent him from gineer's shortcomings, somewhat typical of the group. getting the thousand-dollar klystron The picture is not

could do almost any job better than cal procedures he contrives would it is being done if only he cared to work perfectly *if* the people who be bothered with such inconsequen- have to carry them out were para-As a result of this discussion, I be bonnered with such inconsequent into include a more critical look at tial things. Any hotel clerk, purchas-my associates. Since then I have dis-cussed this problem with psycholo-restify to this, and many an engineer's the fallibility of mortal man. Repeat-restify to this, and to listen to the com-restify to the shad to listen to the com-restify to the transferred to another section. "Now, let's leave personalities out of run much more efficiently if only she this", when often the personalities involved were at the very core of the problem under discussion. This in-ability to relate emotionally and so-

The picture is not all one-sided, test equipment with a multitude of however. Like all men, the engineer switches. He had advanced to the has his virtues, some of which stem stage of incorporating the last critimy large inventory and slow turn-over problems he acts like I was try-ing to cover up with a snow job. If it's such a good racket, why did three out of four new sporting goods busi-toward, against, and away from peo-out of four new sporting goods busi-toward, against, and away from peo-the tal circuit. His attitude seems to be, has his virtues, some of which stem it until today'. tends, for example, to base his de-it. In the meantime his less industri-ising to cover up with a snow job. If it's such a good racket, why did three news sporting goods busi-toward, against, and away from peo-the things he buys, and he can't understand why the company must off he's apt to say that someday he are, in general, easy to get along understand why the company must the average person. Thus he judges went through the involved procehis co-workers largely on merit. An dure of switching on all the various The engineers' answer to this ac- incompetent specialist with a Ph.D. pieces of equipment. Just as he threw social workers, receptionists, sales- cusation would be that since the pur- is looked on with a condescension the last switch, smoke belched from men, etc. The against people type are chasing department does not know bordering on pity while a high school the cabinet and sparks crackled omi-aggressive, exaggeratedly independ- what it is ordering anyway, how does graduate who is a highly skilled nously. Poor Harry rushed up and ent, and inclined to be ruthless and it expect to shop for it intelligently? technician is treated as an equal. The down the bench in panic, throwing cynical, although these traits are To prove their point they have been more competent the engineer, the switches like a madman in an at-sometimes camouflaged under a sur-known to turn in a purchase requi-more likely is this to be true and tempt to save his precious circuit, face geniality. Power and prestige sition for "A polychrome reflecting, also the less apt he is to be concerned while his unfeeling associates held are their touchstones, whether they piscatorial airflow stabilized, self- about his own title or formal posi- their sides from laughter.

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When I pointed out that actually the department manager was sitting at the far end of one of the side tables, the innkeeper was more mys-tified than ever. "Don't these guys worry about what people will think?" he asked.

The answer is that they seldom do. The really competent engineer has somewhat the same feeling of pride and security as the oldtime skilled craftsman. He is confident that he is in demand because of what he knows and what he can do, and not because of whom he knows or whom he can influence.

An example of this was related to me by a colleague from a western electronics plant. A man named Dillard worked with a group of six or seven engineers. Though one of the least productive of the group, he had aspirations toward being their supervisor. Overly concerned with ap-pearances, he felt it would enhance his prestige if their single telephone were on his desk. The other men had no objection, but the phone cord was about eighteen inches too short to reach his desk. Knowing the ridicule he would receive if he asked the man at the desk in front of him to change places, Dillard devised a plan. Each evening he surreptitiously moved each desk in the row forward about two inches. He was well on the way to his goal when another member of the group, an oldtimer who had been in engineering for many years, became suspicious. As a result, he inconspic-uously marked the position of his desk. Sure enough, the next morning it had been moved forward two inches. It is typical of the engineer's sense of humor that, instead of moving the other desks back, the oldtimer went to the junction box and each day shortened the cord by an equivalent amount. Dillard was now fighting a hopeless battle, so near to his cherished goal, which always remained just beyond reach. When he finally tumbled to the trick, he was so humiliated that he soon asked

This talent for complicated practical jokes was recently demonstrated in my own lab. Harry, one of our most conscientious men, had been there is a serious doubt as to whether capital. engineers as a whole are participat-ing members of society. What I had on the subject: "Your average engi-formerly considered to be individual neer seems to feel that I am part of formerly considered to be individual neer seems to feel that I am part of the members of society. What I had on the subject: "Your average engi-tion and the subject is probably the series of most of the series of the se supplies, signal generators, and other

as though any fool could run a sport- ested in others. They tend to become ing goods store!'

An attorney had a different com-"They don't have any concept plaint. of the realities of life, especially in regard to legal matters. Last week one came to me who had contracted to buy two houses. After signing for one, he changed his mind and signed for another with a different real the first house. When I said it wasn't possible and that the purpose or earnest money was to protect the seller in such cases, he insinuated that I couldn't be much of a lawyer. After he also found out I couldn't break the lease on his apartment, he said that he didn't see why he should pay me since I had not done anything about the mess he got himself into!"

"That's typical of them," agreed "They have no the local banker. "They have no business sense whatever, yet they think anyone can make money if he they are valid. is willing to be dishonest. Lord knows there are enough shady businessmen around, but they don't make money just because they are crooked."

"Of course not," said the attorney. "Much of my work comes from bankruptcy proceedings against such diseasy to circumvent it. An unethical man can still make money only if he knows his business.

are their touchstones, whether they or what have you. The away from transporting device with automatic ment, tend toward compulsive perfectionism, and are, in general, ment, things who work like people." As the up to the point of sending the re-

This "away from people" tendency

neers are very inept in their dealings engineer to become emotionally in- embarrassing farce. with others. They seem to know and volved with others also helps to ex-be interested in little but their own plain his condescension toward their in general, but paradoxically, when from the plant manager down to the

be self-made business men, doctors locomoting personnel and equipment tion. estate agent. He wanted me to help people type avoid emotional involve- canvas solar protector. To be tem-him get his earnest money back for ment tend toward compulsive persture stability controlled be perature stability controlled be- show like the plague. Once after a complicated practical jokes. Howtween 65 and 80 degrees fahrenheit, farewell party for a colleague who ever, rather than being of the ebulintroverts. It is to this last group that with non-transmitting electron was transferring to another plant, I most engineers, many accountants, communication equipment, and diand some artists belong. They are rection control indicators both exter- in wonder. people who prefer to work with nal and panel light." This requisition things. A pretty secretary who had was accompanied by several pages of been trying unsuccessfully to attract very logical justification as to its a handsome bachelor in my depart- need and uses. It was permitted to. ment once remarked, "Engineers are go through the usual channels right psychologist emphasized, there are, quests for quotes. It was then pointed of course, many exceptions to the out that a careful reading of the above classifications, but in general requision would reveal that the company was on the verge of order- and there are only five people using ing a white, fish-tailed Cadillac with it, including the guest of honor. All of the engineers is accentuated heater, air conditioning, radio, and the rest are at the two side tables as by their inability to communicate turn signals. Since now it was surely far away as they can get. If this were with others about their trade. In most obvious that the other departments a group of businessmen or salesprofessions it is possible to discuss did not understand what they were men, I would probably have had to almost any aspect of the work with ordering, the engineers suggested add some more place settings for a reasonably intelligent listener, but that they would appreciate it if their the guys who wanted to show that reputable people. Despite what your this cannot be done in engineering, purchase requisitions were no longer they belonged with the wheels." engineer thinks, the law is based on which is built upon an interlaced questioned by incompetent paper "Perhaps they are afraid of being sound moral principles, and it's not network of mathematical and tech-shufflers. This incident is typical of criticized for crowding in where they nical knowledge. Thus the engineer their lack of appreciation of the hu- don't belong," I suggested. is likely to have the impression that man equation, because, of course, the other tasks are not only less difficult resentful clerks intensified their mi- darn unusual. For another thing take slightly tired of waiting! Is that One of the main points made by all than his own but perhaps even nute scrutiny of all requests if only the speeches! Only that fellow who members of the group was that engi- unessential. The reluctance of the to prevent a repetition of such an presented the gift gave a talk, and he

work. In general, they felt that the abilities. Since he avoids situations in a position to do so, he sometimes janitor giving a eulogy, and in that members of this profession were to- where his associates might tell him devises an elaborate organization of order, too. I can't even tell which tally lacking in social graces and their problems, he remains unaware his own that ignores this same hu-one of those five guys is the boss!"

Although there are exceptions, en- surprisingly good sense of humor was transferring to another plant, I lient or life-of-the-party type, it is

amazement.

"I can't help agreeing with you, but exactly how do you mean?" I asked laughingly. "I asked laughingly. "I asked laughingly. "I can't help agreeing with you, being strained. For example, one of our products had not been released to a manufacturer by the design

"Well, first look where they are sitting! I set a head table for fifteen, still had to be located. An official, Id some more place settings for "design the pieces out of everything". he ended by saying, "Nothing is ever absolutely perfect. If there is some-thing slightly wrong or if it can be

"You must be right but it's still Only that fellow who

obviously didn't like it much. Most

On the whole the engineer has a

more usually directed toward timely witticisms. Many a pretentious com-"These are the darndest people I pany man has had his meeting broken ever saw," he said with obvious up and his aplomb shattered by one amazement. of these salient thrusts from an engineer who felt that his credulity was

to a manufacturer by the design group because of serious bugs that who for reasons of personal prestige and company politics had a selfish interest in an early marketing of the item, called the men together. After a scating lecture on the finickiness of engineers who always want to

slightly improved you guys are always so concerned about it. Now I want this job released because I am clear?

"Just one thing, sir," said a young engineer respectfully. "How can you help but be concerned if you eat a slightly rotten egg?"

The engineer's approach is so di-(Continued on Page 4)