

inputOUTPUT

DARK, DANK, AND DISMAL

Imagine a day without mechanical engineering.

You wake up in a cold room because, without modern heating systems, every tree within 100 miles has already been burned. Stumbling over your cat, which you did not see because you can't switch on the lights, since electric generators were never invented, you decide to take a refreshing shower.

Oh, and what a refreshing shower it is. Turning on the water (if there are civil engineers on the job and if they have figured out how to deliver water without pumps), you are rudely reminded that hot water is available only at luxurious spas that import wood.

Showering and wondering if you should have gotten out of bed, you hope that some good music will cheer you up. It would be nice to listen to a high-quality CD, but that is impossible because you have no power, and even if you did, the motor that turns the CD does not exist.

Thank goodness for those clever chemical and electrical engineers who build battery-powered transistor radios. After 15 minutes of squeaky music (Oh, yeah, mechanical engineers also design music speakers.), you decide to get breakfast.

After getting on your bicycle (You still call it a bicycle although it rides more like a tank because its inflexible materials weigh 50 pounds, and it has no gearing.), you struggle to the local cafe, dreaming of a more automated way of driving around or even of flying through the air. Cold and hungry, you get in line behind your col-

leagues, some of whom, you sense, have decided to forgo the cold morning shower.

There is lots of commotion behind the kitchen because the chickens are unhappy giving up their eggs and the cows are mooing while being milked. Or did you forget that refrigeration requires compressors and a cooling system? Regardless, you choke down breakfast, undercooked because there

clothes neatly, and flying machines that can outrun an echo in a canyon and others that are faster than a shooting star. Everywhere on the planet, humans can see and hear each other, connected by devices that talk to the heavens and are powered by clean and renewable resources. You dream of tiny robots that probe and fix the heart, mind, and body—healing breaks, blocks, and bruises.

Waking up from your long sleep, you wonder just who would build such things.

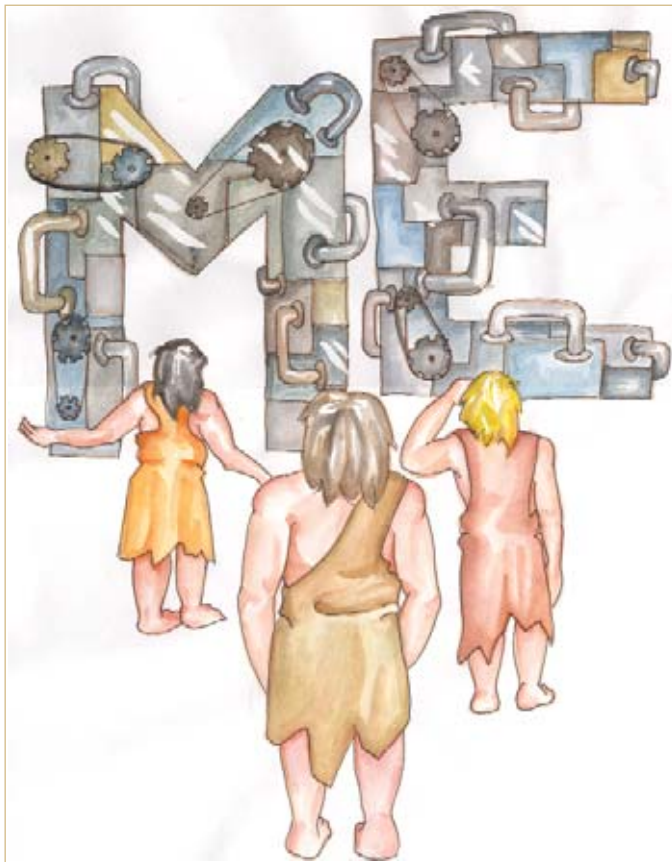
It would take diverse communities of dedicated men and women who are bound together by the common goal of making life safer, healthier, more hospitable, and more fun. You realize that, like the pyramid builders or an army of ants, these engineers would get little individual recognition or appreciation.

Engineers express love with better vacuum cleaners, more efficient power tools, and cleaner wastewater treatment plants. Their inventions are not always artistic, but neither is raw sewage thrown from a second-story window. In a wordy world where talk is cheap, engineering has a concreteness and usefulness that is not easily faked.

After a day without mechanical engineers, it makes you wonder what life would be like without even higher-priced professionals, such as lawyers, real estate brokers, or baseball players.

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are no modern, efficient cooking appliances and fuel is precious.

The morning has left you cold, dark, and cranky—and close to tears, especially when you realize that the rest of the day has much more of the same in store for you. You ask a friend for a tissue, and she passes you a leaf so you can have a good cry. Thank goodness, you don't need a mechanical engineer for that.

You dream of whirling machines that quietly sort, wash, dry, and fold