

# SCIENCE & YOU

VISIBLE CREATION SHOWING US THE INVISIBLE GOD

## TOO HOT, TOO COLD...AH, JUST RIGHT!

A thermostat is an example of a mechanical *feedback loop*. When set to a particular temperature, it senses changes in air temperature and reacts to defend the *setpoint temperature* by turning the heating or cooling system on or off.

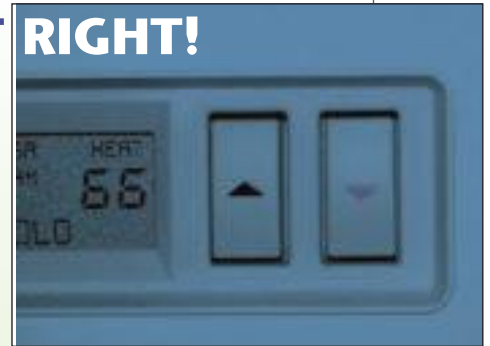
Living things use the same principles to maintain body temperature, blood pressure, blood sugar, adequate blood calcium levels, to control bone growth and regulate the supply of energy in cells—just to name a very, very few.

In many cases, the regulation of enzyme activity or level of minerals is exquisitely controlled within a very small range. Intelligent people designed and built the thermostat and the cruise control in an automobile. People also determine the setpoint of the mechanism. But where did biological feedback loops come from, and who or what determined their setpoints? Did the loops just design themselves by evolution?

Describing a feedback loop in a living cell or organism is simple. It is much harder to understand exactly how nonliving chemicals sense a condition, compare it to a pre-set level and then react to bring the condition back to where it should be. How do mere chemicals know what should be? We speak about how the body “controls” blood sugar by directing the liver to make and release sugar at night and by releasing insulin after we eat, causing muscle cells to pick up sugar from the blood. But people understand *why* keeping blood sugar in a certain range is good and what specifically the range of blood sugar should be. This is a type of understanding that chemicals themselves just do not have.

Partial feedback loops are of little to no benefit. If the body could sense high blood sugar or high blood pressure and yet not be able to react to change, it is of little survival value. In fact, when feedback loops don't work, we call it “disease”—like diabetes or hypertension. These diseases decrease rather than increase survival. According to evolutionary doctrine, each small change in structure and function must be of survival value to be passed on to future generations. Yet for a feedback loop to function and be of survival value, all the parts must simultaneously exist in the same living cell or body. So how could an entire feedback loop ever evolve when partial loops actually decrease survival?

Evolution requires adherents to believe by faith, without proof, that the thousands of biological feedback loops evolved independently and sequentially over time with no intelligent input. In essence, to believe that the spring designed the thermostat. This is not what happens. Mechanical and biological machines just don't make themselves. If feedback loops did not make themselves, and people didn't make them, isn't it more reasonable to believe the biblical statement that “*all things have been created by Him,*” that is, God the Son (Col. 1:16)? He is the only one who has the intelligence to design, the power to make and the understanding to determine the setpoint of living feedback loops. “Honey, can you turn the heat up?”



MICHAEL G. WINDHEUSER, Ph.D.