New Haven — What people think about many of the big issues that will be discussed in the next two months - like gay marriage, stem-cell research and the role of religion in public life - is intimately related to their views on human nature. And while there may be differences between Republicans and Democrats, one fundamental assumption is accepted by almost everyone. This would be reassuring - if science didn't tell us that this assumption is mistaken.

People see bodies and souls as separate; we are common-sense dualists. The President's Council on Bioethics expressed this belief system with considerable eloquence in its December 2003 report "Being Human": "We have both corporeal and noncorporeal aspects. We are embodied spirits and inspired bodies (or, if you will, embodied minds and minded bodies)."

Our dualism makes it possible for us to appreciate stories where people are liberated from their bodies. In the movie "13 Going on 30," a teenager wakes up as Jennifer Garner, just as a 12-year-old was once transformed into Tom Hanks in "Big." Characters can trade bodies, as in "Freaky Friday," or battle for control of a single body, as when Steve Martin and Lily Tomlin fight it out in "All of Me."

Body-hopping is not a Hollywood invention. Franz Kafka tells of a man who wakes up one morning as a gigantic insect. Homer, writing hundreds of years before the birth of Christ, describes how the companions of Odysseus were transformed into pigs - but their minds were unchanged, and so they wept. Children easily understand stories in which the frog becomes a prince or a villain takes control of a superhero's body.

In fact, most people think that a far more radical transformation actually takes place; they believe that the soul can survive the complete destruction of the body. The soul's eventual fate varies; most Americans believe it ascends to heaven or descends into hell, while people from other cultures believe that it enters a parallel spirit world, or occupies some other body, human or animal.

Our dualist perspective also frames how we think about the issues that are most central to our lives. It is no accident that a bioethics committee is talking about spirits. When people wonder about the moral status of animals or fetuses or stem cells, for instance, they often ask: Does it have a soul? If the answer is yes, then it is a precious individual, deserving of compassion and care.

In the case of abortion, our common-sense dualism can support either side of the issue. We use phrases like "my body" and "my brain," describing our bodies and body parts as if they were possessions. Some people insist that all of us - including pregnant women - own our bodies, and therefore can use them as we wish. To others, the organism residing inside a pregnant body has a soul of its own, possibly from the moment of conception, and would thereby have its own rights.

Admittedly, not everyone explicitly endorses dualism; some people wouldn't be caught dead talking about souls or spirits. But common-sense dualism still frames how we think about such issues. That's why people often appeal to science to answer the question "When does life begin?" in the hopes that an objective answer will settle the abortion debate once and for all. But the question is not really about life in any biological sense. It is instead asking about the magical moment at which a cluster of cells becomes more than a mere physical thing. It is a question about the soul.

And it is not a question that scientists could ever answer. The qualities of mental life that we associate with souls are purely corporeal; they emerge from biochemical processes in the brain. This is starkly demonstrated in cases in which damage to the brain wipes out capacities as central to our humanity as memory, self-control and decision-making.

One implication of this scientific view of mental life is that it takes the important moral questions away from the scientists. As the Harvard psychologist Steven Pinker points out, the qualities that we are most interested in from a moral standpoint -
consciousness and the capacity to experience pain - result from brain processes that emerge gradually in both development and evolution. There is no moment at which a soulless body becomes an ensouled one, and so scientific research cannot provide objective answers to the questions that matter the most to us.

Some scholars are confident that people will come to accept this scientific view. In the domain of bodies, after all, most of us accept that common sense is wrong. We concede that apparently solid objects are actually mostly empty space, and consist of tiny particles and fields of energy. Perhaps the same sort of reconciliation will happen in the domain of souls, and it will come to be broadly recognized that dualism, though intuitively appealing, is factually mistaken.

I am less optimistic. I once asked my 6-year-old son, Max, about the brain, and he said that it is very important and involved in a lot of thinking - but it is not the source of dreaming or feeling sad, or loving his brother. Max said that's what he does, though he admitted that his brain might help him out. Studies from developmental psychology suggest that young children do not see their brain as the source of conscious experience and will. They see it instead as a tool we use for certain mental operations. It is a cognitive prosthesis, added to the soul to increase its computing power.

This understanding might not be so different from that of many adults. People are often surprised to find out that certain parts of the brain are shown to be active - they "light up" - in a brain scanner when subjects think about religion, sex or race. This surprise reveals the tacit assumption that the brain is involved in some aspects of mental life but not others. Even experts, when describing such results, slip into dualistic language: "I think about sex and this activates such-as-so part of my brain" - as if there are two separate things going on, first the thought and then the brain activity.

It gets worse. The conclusion that our souls are flesh is profoundly troubling to many, as it clashes with the notion that the soul survives the death of the body. It is a much harder pill to swallow than evolution, then, and might be impossible to reconcile with many religious views. Pope John Paul II was clear about this, conceding our bodies may have evolved, but that theories which "consider the spirit as emerging from the forces of living matter, or as a mere epiphenomenon of this matter, are incompatible with the truth about man."

This clash is not going to be easily resolved. The great conflict between science and religion in the last century was over evolutionary biology. In this century, it will be over psychology, and the stakes are nothing less than our souls.