**Promotion of the Human Genome Project**

The Human Genome Project (HGP) has generated considerable scientific controversy (Perspective, 27 July, p. 342) (*1*). Unfortunately, some of its proponents have obfuscated the discussion with their rhetoric. Advertising the HGP with slogans equating the complete genetic map to the "grail," the "essence of human life," or a "blueprint" for understanding human biology creates an aura of unbelievability around a concrete task and a potential for a public-political backlash. Daniel E. Koshland, Jr.'s editorial of 12 October (p. 189) takes the campaign to promote the HGP to dangerous new ground.

Aside from the absurdity of suggesting that the complexity of unfortunate forces that produced a homicide in Berkeley could be fixed by the HGP, Koshland states, "[w]hile some inherited illnesses cannot be alleviated without a biochemical cure, in others there is only a tendency to disease. . . ." To my knowledge, this is the first time that a respected scientific or biomedical journal has stated that predispositions are illnesses. This notion, if accepted, would define a substantial portion of the general population as the "asymptomatic ill," subjecting them to the varied prejudices, stigmas, and discrimination that the ill suffer in our society.

I, with Koshland, hope that the HGP will clarify the analysis of multifactorial traits, although it will certainly most directly help those with monogenic or other types of inherited disorders with simple genetically controlled mechanisms. Rather than trying to manipulate the public to support the HGP with exaggerations and unrealistic wishes, let the HGP's advocates simply restate the recent successes of human genetics and show that these advances are improving the human condition safely.

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REFERENCES

1. R. G. Martin, *New Biol.* **2**, 385 (1990).

*Response*: Of course the tendency to get an illness is not an illness, and the context of my editorial clearly indicates that is not what I intended to say. Individuals can inherit a susceptibility to cancer or to heart disease that can be diminished by appropriate diets or behavior modification. Warning such individuals so that preventive measures can be taken will be a major benefit of our increasing genetic knowledge. But clearly someone who might get cancer in the future is not ill. The wording of the sentence that Billings quotes could be construed to support his interpretation, but I doubt whether he or any other reader really believes that is what I meant.

Moreover, it is not absurd to suggest that mental illness will be helped and in some cases cured by genetic knowledge. The knowledge will be just as useful and no more so than that applied to other inherited illnesses such as cystic fibrosis. The genetic knowledge will not per se provide the cure, but it will be a step to the proteins involved and the ultimate design of appropriate drugs.

Finally, I hope it is clear that the quotes in the first paragraph are not my words, as their juxtaposition with my name could mislead some readers.

—DANIEL E. KOSHLAND, JR.

## PUBLISHER'S NOTE

On behalf of the staff of *Science*, it gives me great pleasure to express publicly congratulations to our Editor, Daniel E. Koshland, Jr., for receiving the National Medal of Science. The Medal, which is this Nation's highest scientific honor, is well-deserved recognition of Dr. Koshland's many contributions to science and society. At *Science*, we take pride and joy in having this distinguished American as our friend, colleague, and Editor.—

RICHARD S. NICHOLSON