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COVER: Whale hurtles from the water in Glacier Bay, Alaska, a summer home for the humpbacks. Recent discoveries about changes in the whale's loud, slow song and about its feeding behavior indicate an intriguing whale intelligence. See story on p. 26. (Photo: Al Giddings, National Geographic Society)

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LETTERS

Shroud talk

In his article on the Turin Shroud (SN: 12/30/78, p. 442), Dietrick Thomsen sounds as if he is trying to make a case for the authenticity of the shroud (as opposed to simply reporting what is being done). An excellent case in point is his closing the article with a paragraph strongly in favor of numina as evidence of authenticity.

Perhaps the reason numinous effects are so largely overlooked as evidence is that they deserve to be. Considering the nature of the place, the atmosphere and the type of person who views the shroud, many of whom are truly pilgrims rather than tourists, it would be incredible if there were *not* numina described. In connection with this, I have yet to hear of group numina, so that personal descriptions of numina are the real "evidence," and these would be, quite naturally, the exaggerations of people overcome by a "mystical" experience. Hardly very scientific, even to a psychologist.

As ever, people experience what they expect and/or want to experience. If you undertake a trip to the shroud believing, not necessarily consciously, that the shroud is Jesus' burial cloth, you might well experience numina. This might well be true even if the cloth on display were a stand-in, so the real cloth could be kept elsewhere for safety purposes. Thus numina are treated exactly as they should be: with a shoulder shrug and a "big deal."

K. A. Boriskin
Framingham, Mass.

I appreciated the appropriateness of Dietrick Thomsen's observation that it is unscientific to have a closed mind to spiritual phenomena. Religion has largely accepted science as one avenue to learn truth, and it's good to see science returning the overture.

David Gaetano
Wheaton, Md.

There is an interesting discrepancy in your article on the Turin Shroud. Assuming a body made the shroud, John Jackson and Eric Jumper reconstructed a three-dimensional image of the body using microdensitometer tracings and male subjects. They believe it has "a high degree of reliability and accuracy." However, another photograph in the article has a painting of the body as imagined by the artist Clovio — which does not match with Jackson and Jumper's figure. The hands are crossed differently! Observe the photograph of the shroud and stand in front of a mirror to see who you would put your money on (Clovio has mine).

Gregory Zahuranec
Butler, Pa.

The article "A Shroud of Uncertainty" was a most interesting review. The studies, however, did not indicate the possibility of xerography, a method of printing in which a negatively charged ink powder is sprayed upon a positively charged metal plate, from which it is transferred to the printing surface by electrostatic attraction.

Esther Legacy
Burke, N.Y.

I was quite interested in your story on the Shroud of Turin. However, I have some points that need clarification: What does the word "numinous" mean? We have three big dictionaries here at home and none of them have this word. Also, regarding the idea that nothing supernatural can exist "except certain hidden variables in quantum mechanics," just what does that mean, in terms laymen can understand? Perhaps even Mr. Thomsen is lacking in knowledge in this area.

D. Whiteside
Belvidere, N.J.

(There are things that are no less real for not being susceptible to investigation by the paradigms of natural science. These paradigms are designed for phenomena that submit to certain strict philosophical principles about repeatability, causality and logicity. The numinous, which is the nonrational aspect of religious experience (see p. 1,550 of Webster's Third New International Unabridged), obviously does not fall under these rules.

But then neither do some natural phenomena; quantum mechanics generally disobeys the rules of deterministic causality. In classical physics you can uniquely predict the behavior of an individual body. Under quantum mechanics the behavior of individual subatomic particles cannot be predicted. Only statistical rules for large numbers of particles can be derived. Einstein cursed at this situation with the remark: "God does not throw dice." In response to that kind of grousing the idea grew up that perhaps on a level of existence too fine to be seen by current experiment there existed a complex of causes ("hidden variables") that uniquely determined the behavior of individual electrons or neutrons. Experiment has never found evidence of such a hidden determinist world, and most physicists now regard hidden variables as a phantom.

A lot of junk is hawked in the name of religion, and a lot of swindles, from the coast of Virginia to the coast of California. Virgin Marys that glow in the dark usually have only the power to startle. Nevertheless I am willing to stipulate that some people have described numinous experiences accurately as some people have described quantum mechanics experiments accurately. To insist that the only reality are phenomena that can be submitted to the paradigms of classical science is itself a religion. —D.E.T.)

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