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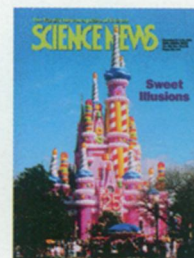
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Cover: Cinderella Castle masquerades as a birthday cake for Walt Disney World's 25th anniversary celebration. The fiberglass structure got a coating of pink paint and a sprinkling of inflatable "candy" decorations. Disney scientists who develop materials and paints create illusions like this one in all of the theme parks. The castle will wear its birthday suit until December 1997. (Photo: Walt Disney Co.)



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## Letters

### Revisionist art

By the time I had finished reading the article on rock painting ("Visions on the Rocks," SN: 10/5/96, p. 216), I was sure I knew how Archimedes felt when he determined how to measure the volume of an irregular object. "Eureka!" I thought, so that's how it happened. For years I had been perplexed by bits of commonality in ancient and prehistoric religions, mythology, and constellations; they were too numerous to be accidental and occurred in cultures separated by vast distances.

Altered states of awareness would have produced similar, though not identical, experiences. For example, the central figure in the picture on the cover bears a striking resemblance to the jackal-headed Egyptian god Anubis, complete with capped scepter in his right hand as he conducted the dead to judgment.

The researchers may find it advantageous to confer with current scholars of prehis-

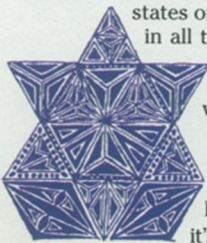
toric religions, mythology, astronomy, and constellations to find meaning in these images.

*Richard E. Lang  
Lincoln, Mass.*

I have visited and photographed four petroglyph and pictograph sites in the Southwest. However, your statement, "Dots, zig-zags, and other shapes linked to altered states of consciousness appear in all these works," made me examine my notes of a recent meeting at work more carefully.

To the left is an excerpt from my notes. Previously, I believed I was just doodling. Now, it's clear that meetings, particularly those after lunch, can induce trances in susceptible individuals.

*Gilbert C. Jennett  
Houston, Texas*



Although I agree that some of the rock art of European prehistory derives from the experience of people in trance states (as anyone who has picked the little mushrooms that cover the meadow in autumn will attest), I do not know how this conclusion was reached by the researcher's documentation of painted images in the Irish passage mounds.

No painted images survive on any megalithic structures. You must be referring to rock engravings.

*Nicholas R. Mann  
Albuquerque, N.M.*

I wonder about the present-day shamans of the San tribe: Did they have anything to say about the paintings?

*Ellie Gunn  
McMinnville, Ore.*

Arrows of sickness and man-beast shamans?

Letters continued on p. 396

Nah. I'll tell you what's really going on in that cave painting. Some of the images do double duty, but I assume that's because the artist ran out of wall space.

What we have here is a stressed-out executive—okay, maybe it is a shaman after too many trips to the spirit world—trying to get some weekend relaxation at the club. At the upper right, we see him set off in his golf cart, waving at someone behind him. But it's not going well at all. At one point (upper left), he smashes one of his clubs against a boulder. The fish symbols tell us he's having a terrible time with water hazards. The main picture shows him retrieving a ball from the pond (probably on the 7th hole, if the number of fish is anything to go by).

In its second meaning, the main picture now shows him at the 18th hole, committing a serious breach of the rules by surreptitiously dropping his ball into the cup (he hasn't even removed the flag). But the members of the previous foursome, over there by the clubhouse and pro shop, have seen him and will probably report him to the steward.

Finally, we come back to the first image, which now shows him sitting dejectedly in his golf cart, having just thrown his entire bag of clubs into the stream.

Let me know if you need any more help.

Martin Graetz  
Acton, Mass.

### Explosive reactions

Your article on new developments in taggants is interesting, but it contains some flaws ("Tagged Out," SN: 9/14/96, p. 168). For

example, you criticize tests showing instability in gunpowder and taggant mixtures because they were conducted at a high temperature. It is common to raise test temperatures to speed a reaction. Also, gunpowder can be subjected to high temperatures when a cartridge is inserted in the chamber of a recently fired firearm. It is important to know if the high chamber temperature will cause a hazardous condition.

Also, you tend to equate black powder and gunpowder. Black powder has not been widely used in firearms since the invention of smokeless powder in the late 1800s.

Keith Pyle  
Austin, Texas

*Raising the temperature is a common practice to speed a reaction, but the high concentration of the taggants may have caused problems too. The recommended concentration of taggants is 250 parts per million—a far cry from the 50 percent used. Tests—not to mention years of experience—have shown that at low concentrations, tagged powder is safe.*

*Black and smokeless powders are both gunpowders, and both are explicitly named in the antiterrorism act. According to the Bureau of Alcohol, Tobacco, and Firearms, black powder was used in at least 1,643 bombs between 1990 and 1994.*

— C. Wu

**You describe a method of tagging explosive ingredients by substituting nonstandard isotopes in various concentrations. The isotope combinations can then be used to identify where the chemicals were sold.**

It seems like this scheme could be thwarted by combining many portions of the chemical

(in varying amounts) purchased at different locations. Since there is only a limited number of isotopes of any element, the same isotopes must be reused in different concentrations at the different locations.

The resulting mixture will have a weighted average concentration of each isotope, thus "smearing" the isotopic signature.

Alan Balkany  
Ann Arbor, Mich.

*Isotag proposes giving each manufacturer its own rare element isotope as an identifier, then using isotope combinations of chemicals that already exist in the explosive to identify the date of manufacture and distributor. This scheme would offer thousands of possible chemical tags, though you could still lose some of the date and distributor information. If a suspect is found to have bought the various powders identified in the bomb, it would add to the likelihood that he or she is culpable.*

— C. Wu

**You say the Swiss have successfully used microtaggants in solving 559 bombing cases since 1984. That's almost one a week! Who or what are the Swiss mad at?**

Bernard L. Hill Jr.  
New Orleans, La.

*According to the Scientific Research Service in Zurich, there were 565 bombing cases in Switzerland between 1984 and 1994, including 258 attacks and safe breakings. Only about 16.2 percent of incidents involving untagged explosives were solved, compared to 44.4 percent of cases involving tagged explosives, safety fuses, or detonating cords, all required by the Swiss government.*

— C. Wu

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Plume, 1995,  
330 pages,  
6" x 9",  
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The 1990 census indicates that an estimated 50 million Americans suffer from some form of lactose intolerance (LI), the inability to digest milk sugar. Between 500,000 and 2 million are unable to consume milk products in any form.

The key to living with the condition is knowing how much lactose can be consumed safely, and where in the diet it is hidden. Steve Carper helps to answer these questions as well as others: How do lactase pills work? What about lactose-reduced milk? Can yogurt be tolerated? *Milk Is Not for Every Body* also includes extensive coverage of the many new products that have appeared within the last few years, like Tofutti and Dairy Ease. Other highlights include:

- ◆ Information on the LI baby and child
- ◆ Recommendations for eating out
- ◆ Instructions on reading the new nutrition labels
- ◆ Explanations of the latest diagnostic tests

The author provides a history of the disease and explains exactly what does—and doesn't—happen in the LI person's body to cause such physical anguish. Appendixes include the nutritional value of selected foods and lactose-containing prescription medications.

A glossary, bibliography, and list of pertinent organizations round out the book. —from Facts on File



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