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out assistance, of evolving from the observed smooth distribution of the past to the concentrated galaxies of today. In contrast, cold dark matter, with inhomogeneities predicted from the inflation theory, predicts large-scale structure, which in many ways agrees with observations. This is why cold dark matter is considered a leading candidate for galaxy formation.

Finally, in the Big Bang theory, expansion is not so much a moving away of the galaxies from each other as it is a stretching of the space between galaxies. There is no boundary to the universe or the matter in it, any more than there is a boundary to the finite surface of the Earth. There isn't an empty void surrounding the matter, because there isn't any "there" there.

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Reading about domain walls, cosmic strings and soft bosons, I get the feeling contemporary cosmologists are frantically erecting ever more epicycles to patch a cracking crystalline sphere. No one seems ready to ask the obvious question: Is the Big Bang a bust?

Is this because the Big Bang is still a tenable theory, or is it because so many papers, hypotheses and careers are riding on its success? Frankly, about the only thing the Big Bang's got going for it these days is the ubiquitous microwave background, although findings three years ago of unaccountable anomalies at some frequencies call even that sacred cow into question.

"Seeding the Universe" suggests there is no viable alternative model of the structural formation of the cosmos. I can think of at least one: the plasma universe model, which demonstrates with surprising grace how vast electromagnetic filaments can account for the shapes of galaxies and galactic clustering. Perhaps we need to shift our focus from shadowy pools of axions and photinos, antimatter, and black holes that *must* be there because they're so mathematically elegant, and instead look at what actually *is* there: plasma and electromagnetism. Plasma cosmologists, unencumbered by the theoretical preconceptions astrophysicists carry, are able to look at the universe from a bracingly fresh perspective.

If tearing down our current cosmological myth is the necessary first step toward finding a theoretical structure that does not need continual buttressing, then every day we put off doing so delays our approach to the answer. Life is short, and my curiosity is killing me.

Linda Johnsen
Menlo Park, Calif.

Blowing off pain

Party blowers may be more than a "distraction" for Dr. Jacobsen's young cancer patients ("A favor for kids with cancer," SN: 4/7/90, p.221). Women who experience "natural" childbirth know that taking a deep breath and letting it out slowly greatly reduces pain from uterine contractions during labor. Slow, deep breathing is also taught in stress management classes.

I notice that the children were taught "to blow slowly on the party toy." Perhaps, then, these children were more relaxed, with less tension in their muscles, so that the needle pricks actually hurt less.

Elaine V. Woodall
Brooklyn, Conn.

Spinning and spotting

The effects described in "A new look at moving violations" (SN: 3/17/90, p.174) have been well known to dancers for many years. Dancers utilize a technique known as "spotting" in order to reduce dizziness caused by spinning. While spotting, a dancer fixes his or her gaze upon one particular feature of the room. This is why most classical dancers constantly turn their heads from side to side as they spin across the stage. Ballroom dancers, who do not want to give the appearance of constantly turning their heads, can fix their gaze on the partner's eyes. The moving reference of a partner's eyes seems to be just as effective at reducing dizziness as picking out a fixed point on the wall of the room.

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