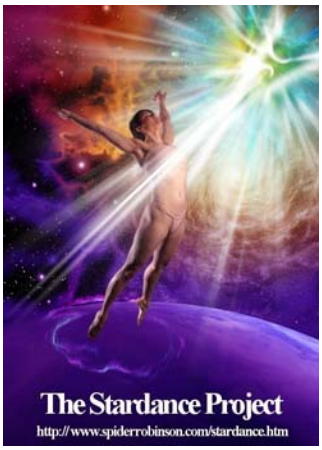
Thrillin' at the MacMillan #5: **THE BEST UMBRELLA YOU CAN GET**

THE BEST UMBRELLA YOU CAN GET

[by]
Spider Robinson



It's probably apocryphal—the best ones usually are—but one of my favorite quotations is what Mahatma Ghandi is supposed to have responded when asked what he thought of Western Civilization. They say he replied gently, "That would be very nice."

A lot of people will give you some variant of that same response if you ask them about space art. "Great idea. Somebody should try that." "*What* space art?" I draw blanks with the idea all the time at social gatherings. Nobody seems to realize there is any.

There's so much, this essay is going to have to be twice as long as usual, just to hit the high spots.

Please note: I said space art. If the topic were "art about space," I would probably get a better response rate at parties. Just for a start, much of the vast canon of written SF and of Hollywood Sci Fi constitutes art about space. I do hope we can all at least agree it is not dismissable—even if not all will join me in believing it to contain some of the most sophisticated and profound art ever created.

And even some non-science-fiction folks have at least heard of the immortal Chesley Bonestell, whose paintings invented and defined the field of *graphic* art about space in the same sense that Robert Heinlein invented and defined most of the classic themes of written SF. Most people my age remember his striking illustrations for *Life* and *The Saturday Evening Post*, or for Walt Disney—many experts credit them with helping to put men on the moon. His greatest disciple Ron Miller <http://www.black-cat-studios.com/> won the international Hugo Award in Toronto a few years ago for editing a spectacular Bonestell retrospective, and ably carries on the master's sense of cosmic awe and wonder himself - as do all his many talented colleagues in the 25-year-old International Association Of Astronomical Artists <http://www.iaaa.org/>. More of Ron later.

Similarly, music about space goes back at least as far as Holst's *Nine Planet Symphony*, if not further…though admittedly most of what followed that has been comedy novelty songs like "Purple People Eater"[i] <#_edn1> or the Byrds' "Hey, Mr. Spaceman!"

And I even know of a bare handful of *dances* about space. I happen to be married to the choreographer who created the first one, and premiered it at the World Science Fiction Convention in Boston in 1980, but there have been others since. One of the best and easily the best known is Kitsou Dubois of France, who has been studying the physics of

dance in zero gravity since 1993—apparently unaware that much of her work was done for her nearly 20 years earlier in the Hugo- and Nebula-Award-winning novella I wrote with my wife Jeanne, “Stardance.” [ii] <#_edn2> Inexplicably she does not appear to have a professional or personal webpage, blog, or public contact address, but she Googles up fairly bountifully otherwise.

But if the subject is *space art*—that is, art *made* in space: the art of future spacemen and spacewomen and those of us groundhogs with imagination—that’s a whole different story.

If any fiction has been written in space, I am not aware of it. And I’d be damned surprised. I need *at least* an hour of silence and immobility before I can begin the first sentence, every time, and one thing everyone seems to agree on about space is that there’s never enough time to *scratch* up there, let alone look out the window, let alone make up a story about what you see out there, let alone figure out what the opening sentence should be and type it.

As for music played in space….well, if you mean *recorded* music, on August 30, 1983, Gulon Bluford became both the first black American in space, and the first person ever to bring an album to space and play it to the world. He chose Lou Rawls’s Epic album WHEN THE NIGHT COMES (title song by Alan Merrill). That was the year Vanessa Williams was Miss America for a few days, and the same year crack cocaine hit America.

I have not been able to nail down who was the first musician to *play an instrument* in space—but I can tell you who it was *supposed* to be. Astronaut and saxophonist Ron McNair agreed to actually *record* a track in space for commercial release, for Jean Michael Jarre’s album “Rendez-Vous.” Sadly, Ron had his own with fate instead: he and his sax were on the *Challenger*.

In 1994, Canadian Chris Hadfield rode STS-74 to a rendezvous with Mir, and there gave its Russian crew a specially modified folding guitar. Another Canadian, Marc Garneau, later jammed with a Russian aboard Mir, the first musical *interaction* in space as far as I know….but I’ve been unable to Google it. I did find mention of flute, saxophone and, interestingly, didgeridu, having been played in space too.

But music in zero gee presents unique challenges, many of which have not yet been solved. For a brief hint of some of them visit <http://science.nasa.gov/headlines/y2003/04sep_music.htm>, and see Ed Lu redesigning the piano for free fall on the ISS at <http://science.nasa.gov/headlines/y2003/images/music/PianoInSpace.gt>. He never did figure out how to rig a useable foot pedal. Others say strapping a keyboard to your thighs is the way to go—but if you like to be able to see the keys, you’ll need to be able hold a sit-up position for long periods, favoring pianists with great abs. (The same applies, by the way, to the keyboards of the future *writers* in space I spoke of earlier, especially the laptops.)

I know of exactly one painting done in space, by Frank Pietronigro—I’ll return to him later—and again you can immediately grasp some of the problems: just for a start, every brush stroke no matter how soft pushes you away from the canvas, and your paint will not remain politely on the palette but drift round in randomly intermingling tendrils.

These and other problems can be solved, but have not been yet.

The same is true of the second-earliest and second-greatest of all the arts: cooking. The late Alfred Bester wrote a brilliant essay on the subject for *Fantasy & Science Fiction* decades ago…and the billionaires who are considering betting fortunes on building orbital hotels had damn well better be thinking about it *hard* today. Almost *nothing* cooks as usual in zero gee. The heat doesn't go up—it goes *everywhere*, cooks in all directions, including yours. Don't even *think* about bacon in a pan. How do you fry an egg over easy? Water boils long before it's hot enough to make coffee or tea in the typically lower air pressure of space habitats—and the coffee won't drip and the tea won't steep without stirring. Above all, however you apply heat to the food, how do you get it to *hold still*? Bearing in mind that in zero gee, if there is not a gentle but firm breeze going at all times, you suffocate in your own CO2 exhalations…

On the bright side, the soufflé *can't* fall, and if you can figure out how to make an omelet in the first place, folding it perfectly is pretty much a matter of letting it drift and hitting it in the middle with a stick. As for bussing the table…let that gentle steady breeze I mentioned take care of it: just come back in half an hour and scrape the garbage off the air-exhaust grille.

We come at last to dance in space.

It was first done by a fictional character Jeanne and I created together in our novella "Stardance," a modern dancer from Canada named Shara Drummond, and was continued in her name after her death by her sister Norrey and a troupe of dancers mostly pirated from Toronto Dance Theatre. I mentioned earlier that a few years later, Jeanne choreographed a terrestrial dance of her own about space, about mankind's drive to reach the stars, called *Higher Ground*, and premiered it at the World Science Fiction Convention. It ended with a sequence of simulated zero gee dance, involving transparent props and a *trompe l'oeil* film backdrop by Bob Atkinson. A thousand fans gave her an extended standing ovation…and afterward the editor of *OMNI* magazine, Ben Bova, came backstage and asked if she would like to dance in space *for real*. She ended up one of the finalists for a seat on the Space Shuttle in NASA's Civilian In Space Program. I thank God she was not the first civilian chosen to go up: it was schoolteacher Christa McAuliffe who joined Ron McNair on the flight that ended them, the *Challenger* and the rest of its crew…and the Civilian In Space Program.

Ms. Dubois has experimented with the kinesthetics of free fall dance in brief moments of *simulated* zero gee, about 20 seconds at a time in a large airplane performing the classic "Hohmann's S" or "Vomit Comet" trajectory. Picture the graph of a hot new stock's value: it rises fast, as high as it can go…then plummets, until it reaches the basement…then rebounds and starts to climb back up. During the plummet, it's in zero gee. A plane large enough to move around in can do that for a max of 30 seconds before wings start coming off. Ms. Dubois has gone up a little over a dozen times now, enough to have learned some things. (There is a common tendency to spend at least the first few arcs suppressing nausea—if you're lucky—hence the "Vomit Comet" name.) But even with her major funding, international profile and university and artistic affiliations, so far nobody is offering to send her to orbit.

Jeanne (stardance@shaw.ca), lacking funding or university support, has yet to dance in even that sort of *simulated* zero gee. But she's never stopped choreographing for it, in

her mind—and is currently in the process of testing whether the state-of-the-art in computer graphics has progressed far enough yet to allow her to at least present an animated CGI *representation* of zero-gee dance onscreen, that will be realistic enough and persuasive enough to demonstrate even to those with visually-challenged imaginations the incredible power, majesty and grandeur that will occur when we finally place mankind's *third* oldest art—dance—against the backdrop of the infinite universe. [iii] <#_edn3> The graphic image at the head of this essay was created by part of her creative team, the above-mentioned Ron Miller; see <http://www.spiderrobinson.com/stardance.htm>

And once we're seriously established in space, choreographers can start playing with the sets Jeanne dreamed up back in 1976: opposing trampolines, for example, or a sphere of them, or outsized monkey-bars, or vast circles of glowing gas to dance around, or transparent cubes or spheres to dance inside.

I can't wait. I only hope it happens before our names are forgotten.

I could use another column at least this long for something we haven't even touched on yet: *new* arts in space. Arts that don't exist yet—that can't, because we live in a place with arbitrary implacable rules for how objects can behave. We speculated on a few of them at some length in THE STARDANCE TRILOGY.

Water art, for a start. You can do magical things with water in free fall—with any fluid, really. Squirt a glob out of a syringe, wait long enough, and you have a ball of water, that ripples and shimmies. Pump air into it with another syringe: you have an iridescent bubble, with colours chasing each other around its surface. Make smaller bubbles with grape juice, tomato juice, orange juice, lime jello. Better yet, make a bunch of coloured ones *inside* the big transparent water bubble. Focus lights on it from assorted angles. Start it spinning….

You can hold a big bubble of water in your hands, pull them apart, and it becomes a big long water-worm, a tube very like the appendages of the underwater creatures from the amazing film *The Abyss*. You can skip rope with it. You can snap it like a whip, and crack off flying bubbles.

Take the classic kid's toy, the Slinky. You'd think it'd be no fun, because it won't go downstairs in zero gee, and it won't. But put the two ends together to make a circle, let go, and watch. It will never stop. Similarly, a boomerang thrown in a spherical space habitat can circle forever. And there's vacuum sculpture: exposing various chemicals to sudden vacuum, freezing them in weirdly beautiful, otherwordly shapes. And a hundred others.

There are people working on them now, as we speak. A space art community has already begun to form…and to lobby. Frank Pietronigro of Carnegie Mellon University (frank@pietronigro.com), whom I mentioned earlier, is co-founder and project director of ZGAC, the Zero Gravity Arts Consortium, a huge and well organized group dedicated to fostering cooperation and interaction between artists and space flight professionals. <http://www.zgac.org> Mr. Pietronigro in 1998 became one of the first artists to create an artwork in microgravity. Floating freely in a tent made of vinyl, he projected acrylic paint into the space surrounding him. "If coincidence so wished, the colours came to rest on the canvas." One of Mr. Pietronigro's aims to develop painting techniques that

will work in free fall.

Also at Carnegie Mellon is Professor of Art (and former Dean of their College of Fine Arts) Lowry Burgess, an artist/poet who in 1989 created the first official non-scientific payload taken to space by NASA, “Boundless Cubic Lunar Aperture.” You may have seen him on *Nova*. (lb30@andrew.cmu.edu) Swiss artist Arthur Woods sent his “Cosmic Dancer Sculpture” up to Mir in 1993; it was designed “in order to investigate the properties of sculpture in weightlessness and to test the advantages of integrating art into the living and working space of cosmonauts,” and you can see a cosmonaut playing with it at <http://www.cosmicdancer.com> if you like. And the great Laurie Anderson recently brought to Vancouver an evening of splendid performance work she created as NASA’s first-ever Artist In Residence…and very possibly its last, if dullard Republican Congresscritter Chris Chocola gets his way on a budget cuts amendment which would forbid NASA to spend a dime on art.

So far, even ZGAC with its extensive international connections has not been able to come up with the kind of funding that would actually send an artist into space. In fact, America was on the verge of abandoning manned spaceflight altogether…until it noticed it was in an undeclared war with China and the Chinese are going to the Moon. [iv] <#_edn4> But several arts projects of ZGAC associates have been successfully orbited already, and now that manned spaceflight is back to stay, it’s just a matter of time.

In the film TUNE IN TOMORROW, screenwriter William Boyd had Peter Falk say to Keanu Reeves some words I’ve never forgotten. “Keep writing, kid, and remember what I told you: life is a shitstorm…and when it’s raining shit, the best umbrella you can buy is art.” That’s true even in environments where rain can’t fall.

One thing I’m sure of. Once we start spending serious amounts of time in space, we’ll get bored of books and TV fast. We’ll feel isolated enough already in artificial habitats: we’ll want the rest of our arts, and especially the performing arts—and we’ll particularly want *new* ones, that help distinguish us from the poor earthbound Old Humans below. If you’re young and looking for a career path, you could do a lot worse.

BC writer Spider Robinson's 33rd book VARIABLE STAR, a collaboration with Robert A. Heinlein, is available in hardcover from Tor Books; for further information visit <http://www.spiderrobinson.com> or <http://www.variablestarbook.com> .

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[i] <#_ednref1> The song was used as the basis of a feature film in 1988, with a cast that included Kareem Abdul-Jabbar, Ned Beatty, Shelley Winters, Little Richard, Chubby Checker and Wooley himself. I don’t know about you but I’d love to see that.

[ii] <#_ednref2> The entire STARDANCE TRILOGY (consisting of the novels STARDANCE, STARSEED and STARMIND) has just been re-released in a hardcover omnibus by Baen Books, and I’m currently recording it for Blackstone Audiobooks.

[iii] <#_ednref3> Some philosophers hold that dance is merely a variant or subset of the

oldest art—one in which impregnation is not sought.

[iv] <#_ednref4> See my last essay here.

OTHER RELEVANT URLs:

www.artscatalyst.org <http://www.artscatalyst.org>

www.pietronigro.com/space/overview.htm
<http://www.pietronigro.com/space/overview.htm>

www.arsastronautica.com <http://www.arsastronautica.com>

www.swissart.net <http://www.swissart.net>

www.spacearts.info <http://www.spacearts.info>