

imagination

The Spire

By James Foley

General Notice to the Public:

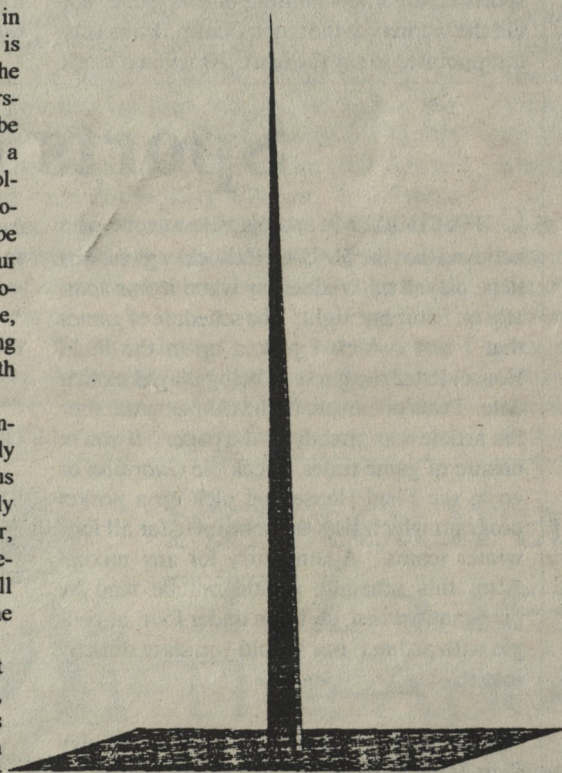
The Spire: a Carleton University Project

This notice is to announce the intention of Carleton University to build a new Mathematics and Computer Science building. Due to the lack of space in Denton Tower, a new and revolutionary edifice is slated for construction. Tentatively called "The Spire," the tower will rise to a height of 892 meters - almost 300 stories in total. But this will not be merely the tallest building in Ottawa. Based on a radical new material developed by Carleton's Biology department, designed by the students and professors in our Architecture school, and slated to be built in a single summer by the students of our Engineering faculty, the Spire is to be made of so-called "Biological Concrete." This substance, when dried and properly cured, produces a strong but flexible material with the properties of both concrete and high-grade rubber.

But Biological Concrete is actually composed of tiny bacteria which have been genetically engineered to grow extremely tough, keratinous outer shells. It is these shells, made up of precisely the same material as human fingernails and hair, which give the concrete its strength. These bacteria, while they are alive, reproduce quickly (as all bacteria do) so that it may almost be said that the building "builds" itself.

The bacteria are started growing in great colonies on top of a traditional concrete foundation, then slowly, very slowly, they find their way across the broad square base of the building, forming a smooth, strong skin which will become the outer courtyard. Then, after the colony has reached a critical mass, it is guided almost straight up from the center of the completed courtyard by electric current and a pumped-in nutrient solution to form the outer shell of the spire. As the outer skin rises, so do the floors; the interior surface of the building consists of a single long spiral, similar in design to the famous Guggenheim Museum in New York. As the successive stories of the tower are built, the bacteria near the bottom die and dehydrate, leaving the keratinous shells in a densely packed structure, while

above the bacteria of the second generation continue the work begun by their predecessors.



But by far the most visionary of the approaches to this building is the exclusive use of computer technology to integrate biological growth patterns with two simple and elegant mathematical equations that define the shape of the structure. The function $z=1/(x^2+y^2)$, drawn by computer in the illustration, gives the entire building its shape. The lines flow in a beautifully sharp and graceful arc to the very top of the tower, in a startling parallel to the natural growth curve of the bacteria themselves. The

second equation, the logarithmic spiral, provides a gently sloping floor that remains unbroken all the way to the peak, spiralling smoothly up and up and up.

After the main superstructure is finished, much of the rest of the building will be completed in the traditional manner. A circular elevator shaft rises between floors. Windows will be cut with diamond-tipped chainsaws or keratin-dissolving agents. Heating pipes will be unnecessary because we will be able to use the natural nutrient ducts created for the bacteria, and the same may be said of water and sewage systems. The entire building will have a brilliant sheen-- a natural effect inherent in the keratin material we will be using. The entire concept is one of unity and beauty, for how better can one build a living, healthy building, but by using the marvelous tools given to us by Mother Nature?

It must be emphasized that despite the revolutionary nature of these design plans the entire building as conceived is completely safe. The bacteria used are of a benign nature, and furthermore, the entire building will be sterilized from top to bottom on completion of the biological concrete segment of the plan. The computers, along with the electric fields they will be monitoring, are also closely monitored. The new methods described herein actually make constructing a building safer in that no human life must be risked in climbing and riveting; the sort of dangerous work often required for a traditional concrete office tower is here completely eliminated.

The public is invited to tour our displays set up in the Turin Conference Centre. Displays are open from 9 AM to 5 PM, Monday to Saturday. Once actual construction is begun, sometime in the spring of 1997, further displays and tours will be available at the construction site. All questions and comments may be addressed by calling 1-800-453-1989, the head office of Inspirex inc., the company created by Carleton to construct the Spire.

More next week. . .

Free

So I went over the wall
I couldn't stand it any more
Cooped up in a cell all day
Only getting to go out for a few hours for
'exercise'
Eating lousy food
Always being harassed by the guards
Locked up with all the lowlifes and scumbags of
the world
Never having any say in what I do
It's no way for a man to live
So when the chance to make a break for it

came, I took it
No one keeps the Jake locked up
And now I live on my own
I found an apartment that's abandoned and no
one gives a shit about anymore, and that's
where I live
I don't go out much, 'cause the cops are still
looking for me, but
I get out at least eight or nine hours a week,
when there's no one around
That's when I raid the garbage cans and
dumpsters for food

I've got to be real careful not to let the coppers
see me, or anyone else for that matter, so when
I'm outside I hide a lot
The only people I can trust are street people,
y'know, hookers, muggers, purse-snatchers..
I know they won't turn me in and they know I
won't turn them in, either
So my life's become pretty routine
Sure, it's not the best way to live
But it's worth it all
To be Free

Movie Review

THE RIVER WILD

Directed by: Curtis Hanson
Starring: Meryl Streep, Kevin Bacon,
Strathairn, Joe Mazzello

Review by: David Ramsay

Meryl who? Yes, you heard correctly. Streep, the woman known for starring in film elaborate costumes and heavy accents, has taken a plunge from tense drama to tense action. The two-time Oscar winner has taken a break from such films as *The French Lieutenant's Woman*, *Death Becomes Her*, and *The House of Savoy* to make a movie more attractive to the high-testosterone movie-goer; however, this new direction may not last long. After all, she just won the most sought-after role in Hollywood, that of the Iowa woman who for Clint Eastwood in *The Bridges of Madison County*.

The River Wild is just the vehicle

The movie itself has a very simple plot, and in no way commands your attention to understand what's happening.

needs to perk up her falling box office appeal; apparently it's working; however, Streep maintains that she did not choose the role because it was popular. Claiming that there are not enough female roles, she says that "Most of the women in movies are sex objects, they are there to be dumped, humped, maimed, or killed." She also says that a lot more to *The River Wild* than action, it's also about people; and she's right.

Filmed beautifully on rivers in Montana and Oregon, *Wild* gets the viewer up-close and personal with the rapids. The movie itself has a simple plot, and in no way commands your attention to understand what's happening. A family of four (Streep, Strathairn, and, "the Jurassic Park" Mazzello) decide to take a nice, quiet vacation enjoying some white water rapids when their trip goes wrong. Just before they start out on their journey the family runs into fellow adventurers (Bacon and Reilly) who quickly become more than a nuisance. After their trip has started, the husband decides these two hitchhikers are a bit too pesky for them and decide to ditch them. This, however, is a bad idea, and what we get is a high-speed, down twisting and turning class five rapids. Six are considered unnavigable.

Kevin Bacon plays a wonderful villain. Meryl Streep is good as the strong-willed Galena. The film seems so scared of becoming just another movie that (with the exception of the last 15 minutes or so) it shies away from fantastic water action. Streep is right, though; there is more here than action. The movie is also about relationships between a boy and his parents, and between a husband and wife who have come to realize their marriage is over. These characters are well-developed and I found their personal problems more interesting than the actual action scenes. Maybe Streep tricked us into believing she has gone action. In fact she is covering old territory.

Grade: B-