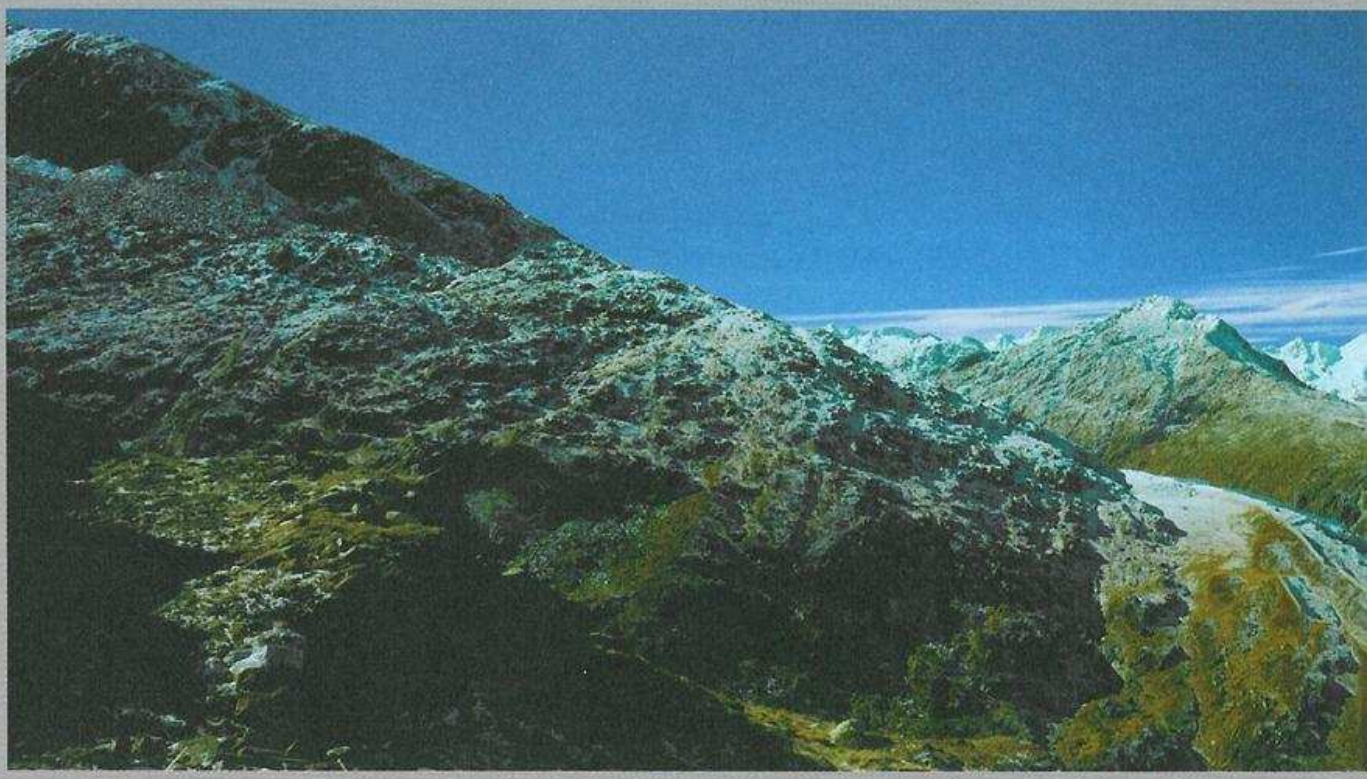
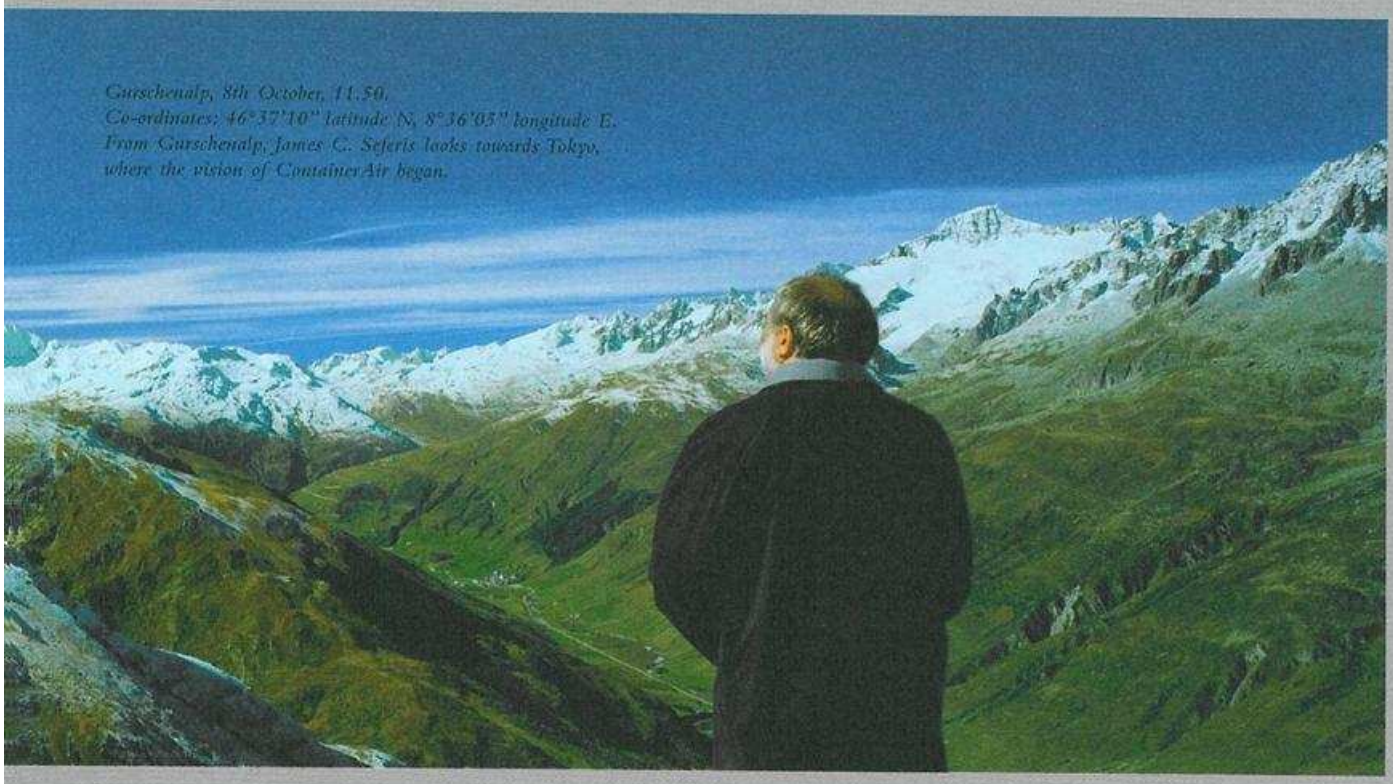
James C. Seferis

THE GLOBALLY ACTIVE TRAINER.



The engineers at Toray, a Japanese company specialised in the manufacture of carbon fibers, had an ambition that matches the ideal vision of every airline: they wanted to build containers that weigh only half as much as conventional material – a perfect assignment for James C. Seferis, at the University of Washington in Seattle. He has a world-wide reputation as a designer of new material systems and processes. Seferis' favourite activity is dealing with problems that are truly challenging, and this one was a hard nut to crack. It was clear to him from the very beginning, however, that the issue was not merely to develop a new material that would weigh less and be at least as rugged as conventional solutions. «The task is quite a bit more complex,» explained the charismatic American with Greek roots, «because a container isn't just a container. It's part of an entire service chain.» For this reason, Seferis assembled a team of students from various disciplines to tackle the problem, recruiting them from the chemical engineering, business, management, psychology, and law departments. The solution



Gurschenalp, 8th October, 11.50.
Co-ordinates: 46°37'10" latitude N, 8°36'05" longitude E.
From Gurschenalp, James C. Seferis looks towards Tokyo,
where the vision of ContainerAir began.

was ready for presentation after a development period of only eight weeks: a smart container, equipped with a microchip that allows it to be tracked and located at any time. The container frame is made of recycled aluminum and it has carbon composite walls. The concept is that airlines will not purchase but instead lease the containers, within the scope of a complete business solution. The project was christened «ContainerAir» and is now being tested in Korea in co-operation with Toray, a logistics team, and Korean Air. «THIS IS WHAT I CALL INNOVATION,» Seferis says. «A PROCESS THAT STARTS WITH AN IDEA AND LEADS TO AN END PRODUCT.» The events after September 11th expounded interest in the project if the container can be made bomb proof. Seferis is already at work on this concept with his knowledge and pioneering efforts in nanotechnology. The container project illustrates that Seferis approaches industrial problems holistically rather than in a fragmented way. The professor is far beyond the stage of developing new materials in his laboratory and letting others deal with applications.

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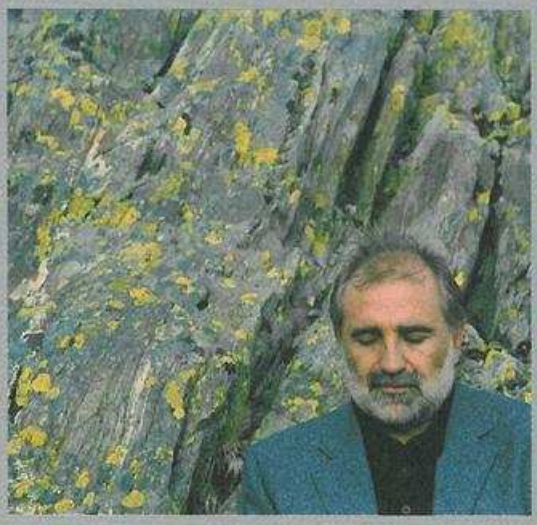
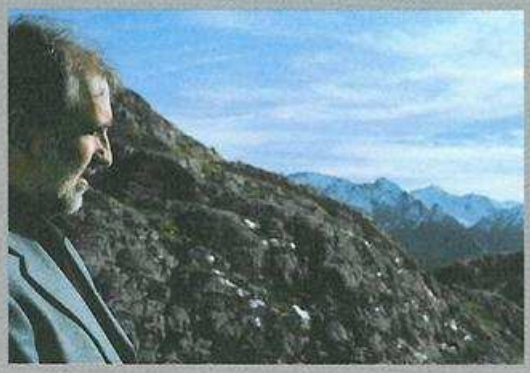


«I HAVE TAKEN THE UNIVERSITY THROUGH THE LABORATORY DOOR OUT INTO THE REAL WORLD,» he notes with a certain measure of pride, adding that science is useless without applications. For this reason, Seferis does not produce purely academic solutions but instead works closely with industrial partners. «We try to understand their needs and then start working on the problem.» The case in point was the successful development of a re-circulating water shower for executive jets. The prototype developed by Seferis' team went on to become a joint venture with The Boeing Co. called Aquajet. Seferis has a long track record of unorthodox thinking. In fact, he owes his first scientific breakthrough to this ability. In 1979, not yet 30, but already professor in Seattle, he made a pioneering discovery: he realised that the stability of polymer composites is not due to the fibres, but to the binding agent that «glues» them together. It became clear to him that polymer composites involve many different aspects and that it therefore makes sense for someone who wants to get answers to enlist the brainpower of many different experts. Seferis has acted on this early experience: today, when he assembles teams, he knows that its members should represent various scientific faculties and companies, and that they must learn to interact smoothly. Seferis establishes the connections and then teaches and coaches the teams – the professor becomes a globally active trainer. He calls himself a «catalyst» who gets processes going and maintains their momentum. This requires a certain degree of modesty. Seferis is convinced that complex projects would be doomed to failure if he were to put himself first. His case in point: «For example, I'm not out for patents and I always make that very clear from the outset.» This inspires confidence and encourages his partners to share their know-how with him. Elsewhere, the key question in scientific projects is always: who get the spoils, who can stake a claim to the new insights, to the new product? Such issues can trigger endless debates before a project ever gets off the ground. Seferis, who



in this sense is perhaps more Greek than American, explains his stance philosophically: «I DON'T WANT TO OWN KNOWLEDGE, I WANT TO WORK WITH IT.» His motivation is to repeatedly discover new things. That keeps him on his toes and powers a constant stream of ideas; he is quite like a volcano in a state of permanent eruption. As a teacher, his principal skill is elucidating. And Seferis says he is still, first and foremost, a teacher. His «products» are adept students. «I don't sell anything, I educate people.» And he does so mainly in the context of hands-on projects, much like the quest for a new, particularly lightweight air cargo container.

Banca del Gottardo provides financial support for visionaries' innovative projects, James C. Seferis among them.