

the mass spacings came out of measurements made in our hydrogen chambers, plus, of course, Fermi and Anderson's old mass value for the Δ . So we could feel, in the language of the official baseball scorer, that we had "an assist" in the important discovery of the Ω ; Gell-Mann used our data to tell the Brookhaven group "where to look" for the Ω .

I would like to close by distinguishing between two classes of discoveries. I have said that if I had been born a few hundred years ago, I would probably have been an explorer. My heroes in the world of exploration are James Cook, and Roald Amundsen (and of course his unlucky rival, Robert Scott). They made great geographical discoveries that are correctly acclaimed by everyone. But just think how different they were; Amundsen found the South Pole, whose existence could be questioned only by members of the flat earth society, while Cook found the Hawaiian Islands whose existence was a surprise to everyone. One can't decide which discovery was more praiseworthy; the point I am trying to make is that we need both kinds. I have described our satisfaction in finding the predicted Ξ^0 , and in watching our friends at Brookhaven find the Ω . We all have enormous admiration for the discovery of the W's and the Z, which are in the same category, but much harder. But I wonder if in the future, anyone will be able to find something completely unexpected, such as the J/Ψ , or the strange resonances. As I look ahead in particle physics, I see support only for the enormously expensive detectors to find particles whose existence has been predicted by theorists. I think that is a very unhealthy situation, and I hope that those who are pressing for a quick construction of the SSC will turn some of their attention to this dilemma; if one is only allowed to look for things that are predicted, from earlier knowledge, both experimental and theoretical, how can we use our powerful new accelerator to find something *really* new, such as the examples I've just mentioned, both in geography and in particle physics?