

Integrated Circuit

Crystalline ikons, slices of Yin and Yang
 Woven into a matrix, an electric mandala
 Or block-printed like a page of Chinese writing.
 Mirror, model and extension of the human brain . . . Hey!
 "What will you do when this circuit learns your job?"
 But the boy with his transistorized prayer wheel
 Hears nothing else.

ALAN MACKAY

That 1932 banquet picture

C. Luther Andrews, chairman at the State University of New York, Albany, is the editors' champion diner namer. After they published the picture of the 1932 American Physical Society banquet in our April issue, Andrews sent a list of 34 "sures" and seven "possibles." Later he amended it to make two possibles into sures. Dorothy W. Weeks (extreme right, center front table) was a close second with 32 names. All together we appear to have named about half of the faces in the picture—85 out of 173.

Which face do you think was most recognizable? It was Karl K. Darrow, correctly named by about two thirds of our respondents. Others often named were Arthur H. Compton, Andrew W. Hull, Robert A. Millikan and Isidor I. Rabi.

Our best known diner, Darrow, gets a special award for naming faces *not* in the picture. He writes from the S. S. *Michelangelo*, "The Lawthers were sitting at the same table, but, alas, the camera missed them." You will enjoy another Darrow comment: "To me the most impressive feature of the picture is the large number of men properly dressed for an evening function of ceremonial importance. Indeed those were the GOOD OLD DAYS."

We had some other respondents who named more than their share of the diners: Charles J. Brasefield, John C. Clark, Herman W. Farwell, Lester H. Germer, Joseph G. Hoffman. Another special award went to Nancy C. (Mrs H. R.) Berl. "Although I am a

chemist," she says, and goes on to identify Elizabeth R. Laird (center front table, left, nearest camera), who was department head at Mount Holyoke.

The editors' remaining problem is to complete their list of names and pick the correct ones for those faces that some of you have named differently. Is the smiling man at left just under Andrew Hull's chin Ralph Bennet, William Shockley or Percy W. Bridgman?

If anybody really wants to work on the matter full time, the editors will send him the list of names as they have them now.

Does excitement make you mean?

Vernon Hughes's anecdote about the moon being a muon, or vice versa (*PHYSICS TODAY*, February, page 34) reminds Thomas H. Osgood of an incident at the Cavendish. In the early 1920's E. A. Milne was the colloquium speaker, and to considerable surprise an inquisitive crowd of both sexes overfilled the lecture room. The explanation, it turned out, was the well advertised title: "The Mean Life of an Excited Calcium Atom."

O joyous need for jobs

From my recent studies I have found that you can have the story of unemployment among physicists any way you want it.

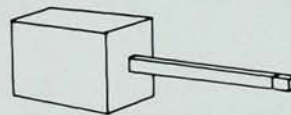
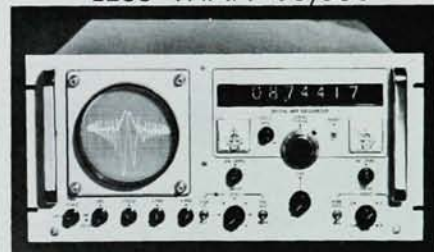
On 22 June the *New York Times* had a long story about unemployment throughout the American aerospace industry. On the same day the *London Observer* had a 10 × 13-cm ad inviting scientists and engineers to join their colleagues in the "USA with a leader in aerospace research." Last November the *Wall Street Journal* had a story about unemployment among physicists. It led to a letter in the February *PHYSICS TODAY*, and other letters have taken up the subject in most of our issues since then. In our March issue Susanne Ellis indicated that many of last year's physics graduates had no job offers.

But take heart. In an interview that Sylvia Porter published in her syndicated column (for example, *De-*

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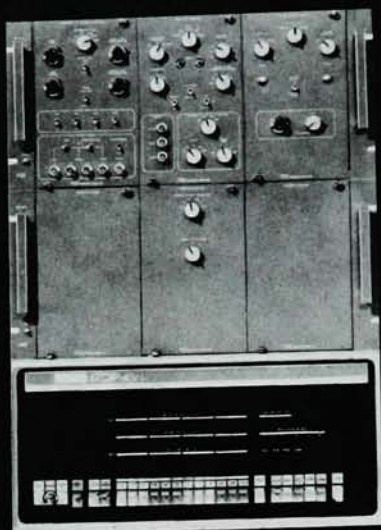


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troit Free Press, 6 June) Emanuel Piore, chief scientist for International Business Machines talks of "the shortage of trained scientific manpower."

The *Times* story focuses on men laid off by McDonnell-Douglas at Huntington Beach, Calif., but extends its consideration across the country. "It's almost impossible to find a basic research job in industry," it quotes a 35-year-old physicist, who also admits he can "leave research and shift to applied physics."

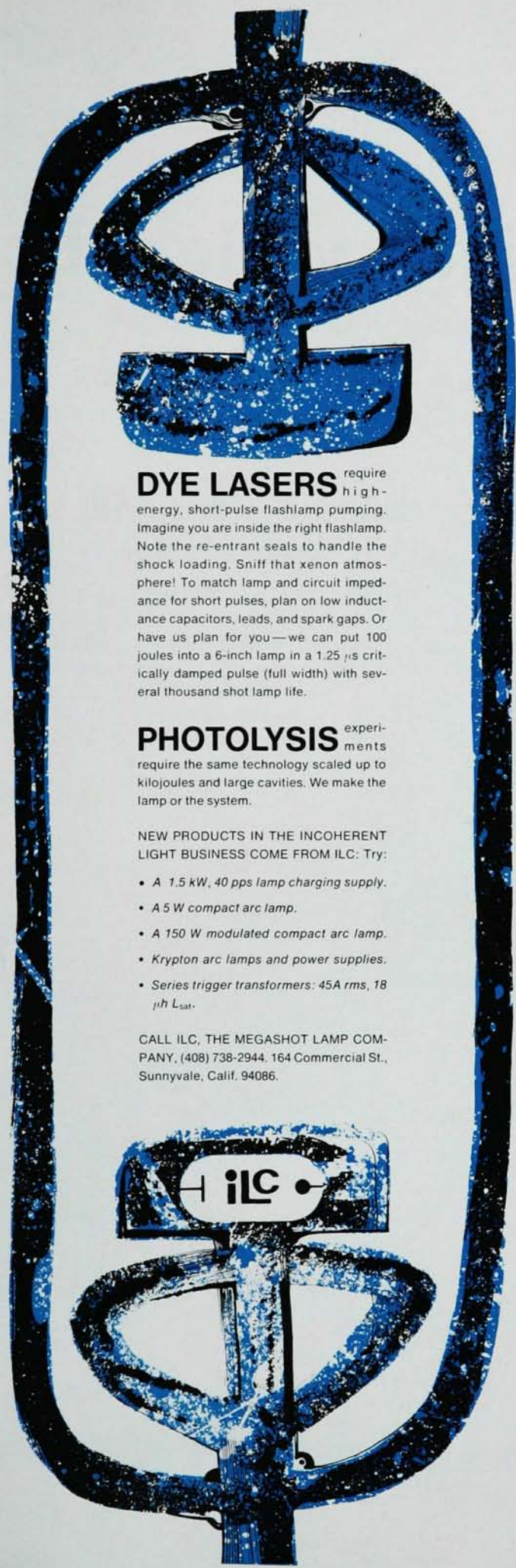
Careers Incorporated ran the London advertisement that starts out: "Engineers & Scientists: USA. Join United Kingdom engineers and scientists already enjoying the advantages of the USA with a leader in aerospace research . . . Representatives of this firm will begin interviews July 7 . . ." A list that follows includes 19 specialties under "electronics, mechanical, remote sensing, support functions."

Piore is worried that a need for men is driving up the costs of technical products. He expresses concern for the "difference between the number of scientists our economy needs and the number available—the 'scientific talent gap.'" As a cure he suggests museums of science to "inspire our youngsters to go in for science careers." He has statistics, too. Scientists and engineers in industry and government are "roughly half of the manpower the National Science Foundation estimated at the start of the decade we would need by now."

I asked Piore to explain his views, and he wrote back that although supply is adequate at present (especially of physicists who want basic research), he believes "there is no question that our country is facing technical manpower deficits in the 1970's."

He also gave me more statistics. An IBM Department of Economic Research projection says the demand for engineers in 1975 will be 1 380 000; the *Monthly Labor Review* of November 1966 said the 1975 supply would be 1 333 000. Subtract and you get a deficit of 47 000. Why did somebody once tell me not to subtract large numbers?

I have a solution now for the whole problem. You fellows should not read those letters about an unemployment crisis. Don't read the March *PHYSICS TODAY* figure about a lack of job offers nor our April "State and Society" story about a "tight job market." Just choose your reading carefully. □



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