

correspondence

Academics in Chile

SIR.—As signatories with other colleagues of a letter on academic life in Chile (*Nature*, May 29) we feel it necessary to comment on Dr Eyzaguirre's answer which appeared in the issue of July 5.

Dr Eyzaguirre says our letter was inaccurate, although he concedes that academic people were killed or persecuted because of "actively" opposing the military junta or because of "denunciation by neighbours or colleagues". We would like to point out the omissions and inaccuracies we find in Dr Eyzaguirre's letter.

(1) Dr Eyzaguirre depicts Dr Allende, the legally elected president of Chile, as a "corrupt" politician whose government was responsible for "chaos and anarchy". He omits to say however, that Dr Allende's government strictly respected freedom of speech and of the press and that nobody was killed, imprisoned or persecuted because of his ideas. Another omission concerns Dr Allende's respect for the independence of the university, exemplified by the election as Rector of the University of Chile of Professor Boeninger, well known to be an opponent of the government.

(2) Dr Eyzaguirre's eulogy of the military coup ("the military struck with vigour") is shocking. He admits that some "unpleasant" excesses were committed. But nothing is said about the killings in the working class quarters (*poblaciones*), the hunting of the foreigners, the tortures and the shootings at the stadiums, and the 'purification' of the libraries followed by bonfires of 'forbidden' books. The authenticity of these events is not in doubt since they have been repeatedly denounced by non-Marxist organisations including Amnesty International, the World Council of Churches and the Conference of Chilean Catholic Bishops.

(3) The comparison that Dr Eyzaguirre draws between the nomination of military chiefs as university rectors in Chile, with the nomination, for example, of General Eisenhower as President of Columbia University would be funny if it were not so sad. In the second case, the university chose to honour an outstanding military and political personality, whereas in the first a military group was imposed on the university to ensure the rigid political control of the faculty and the students.

(4) Dr Eyzaguirre states that "whole-

sale executions of faculty and scientists have not occurred" and that "very few fell either immediately after the coup because, allegedly, were caught either shooting at soldiers, carrying arms or actively participating in the organisation of revolutionary activities". Some examples may illustrate the inaccuracy of such statement. Professors Ramirez and Peña, after being sentenced by the military to only two months in prison, were shot in the city of La Serena. Leopoldo Benitez, an architect, of the Catholic University and Victor Jara, a musician, of the Technological University were assassinated in cold blood at the Stadium Chile. Enrique Paris and Luis Sanguinetti of the University of Chile at Santiago and Michael Woodward, of Valparaiso, died while being tortured. More than ten medical doctors were shot by the junta.

(5) Dr Eyzaguirre takes as an example of the university situation the Catholic University, where no student has been expelled. He says that Admiral Swett Madge, the new Rector, was nominated with the approval of Cardinal Silva Enriquez. He omits to say that the previous Rector, Professor Fernando Castillo Velasco, also approved by the Cardinal, was dismissed by the junta, had his house ransacked and decided to leave Chile. Dr Eyzaguirre also states that only 3.5% of the Faculty was dismissed by the Rector on political grounds. He omits to say that at least four institutes (among them the Institute of Economic History and the CEREN, a centre for Chilean studies) were dismantled and all their members dismissed. He also neglects to say that Father Mauricio Hebert and six other professors were expelled from the country.

Moreover the Catholic University enrolls only 10% of the student population. Dr Eyzaguirre does not quote the number of faculty members dismissed at the University of Chile. He only tells us that the only students expelled (no figure is given here either) were those with unsatisfactory academic records. It is difficult to accept, for instance, that more than half (141 out of 254) of the first-year students in the science school, who were not allowed to re-register, were agitators or professional politicians. A final remark is necessary. When we signed the letter to *Nature* asking for help for the jobless university teachers, and teachers who were persecuted by the junta or who refused to work under a totalitarian

regime, we did not state or imply that the scientists or academics who decided to stay in Chile (among them many respected friends) were fascists. Dr Eyzaguirre says that they are "labouring under difficult circumstances which are mainly economic". We think that this is an understatement in view of the present lack of freedom and disrespect of the human rights. It is because of this that we find it so unfair that Dr Eyzaguirre should dub those who left Chile as '*gauchistes de salon*', in particular because many of them still have families in Chile and are therefore unable to answer him publicly.

Yours faithfully,

H. M. GERSCHENFELD

J. P. CHANGEUX

Paris, France

Algae as fuel

SIR.—A few words may be in order about planktonic algae cultivation as a means of harnessing solar energy, which was not mentioned in your Energy Review (*Nature*, June 21, 1974).

Algal cultivation has many advantages over plant cultivation. Whereas land for afforestation is becoming scarce, vast areas of lagoons and inland lakes are available for algal cultivation. About 1% of sunlight that falls on an area is absorbed by the plants growing there, but sunlight can diffuse through water down to a few hundred feet and so more than 1% of the sunlight can ultimately be absorbed by algae in water. Algae can grow in a variety of aquatic environments and there will be added advantages if sewage is added to the medium because the oxygen liberated by algal photosynthesis can be used by the bacteria in the medium to break down the organic matter in the sewage.

Also algae multiply fast. In large experimental ponds yields as high as 36 tons of algae per acre of pond per year have been achieved, compared with the yield of about 1 ton per acre of dry organic matter which plants yield. Thus a lake of 100 square miles can yield more than 2,000,000 tons of algae per year, which can be used as fuel in conventional thermal power stations.

Yours faithfully,

N. UMAKANTHA

Karnatak University,
Dharwar, India