

NEKI OSNOVNI PROBLEMI GEOGRAFIJE*

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Prošle je godine u čitavom svijetu proslavljena stogodišnjica smrti prirodnjačkog istraživača i enciklopediste A. von Humboldta, a među geografima i C. Rittera, prvog univerzitetskog profesora geografije; obojicu smatramo pionirima naučne geografije. Proslavu ovog jubileja ne možemo odvojiti od raspravljanja o suvremenim problemima naše nauke.

Početak naučnog geografskog rada bio je povezan s velikim dostignućima tog vremena. Utvrđene su metode snimanja i izrađene prve topografske karte, novoosnovani državni servisi dali su brožčane podatke o prostornom inventaru i promjenama u njemu. U naučni rad prodiru egzaktna i kritične metode; došao je kraj proizvoljnim deskripcijama i nepouzdanim dedukcijama.

U proteklih sto godina postignut je golemi napredak u poznavanju i proučavanju geografskog objekta, ali u pojedinim pa i bliskim sredinama u nejednakoj mjeri i na različit način. U prostorno i društveno velikim dijelovima Svijeta pravi geografski rad još nije ni ozbiljno počeo, jer još nema potrebnih izvora naučne dokumentacije ili oni nisu dostupni.

Ustrajanje na naslijeđenim pozicijama, navedene objektivne razlike, unutrašnje divergentne tendencije i nedovoljna međunarodna razmjena misli ogledaju se u velikim razlikama među naučnim gledanjima samih geografa. Geografije ne samo različitih zemalja već i pojedinih univerziteta međusobno se bitno razlikuju. Možda je pretjerano plastična tvrdnja da ima »više geografija nego geografa«,¹ ali je točna i za nas žalosna konstatacija da »nema izgleda da će druge nauke cijeniti, poštovati i prihvatiti našu, dok su u pitanju osnova i priroda geografije«.²

Nauka koja studira Svijet oko nas i ilustrira naš položaj u njemu, nije dobila odgovarajuću ulogu i podršku u suvremenom životu, iako se uviđa opća potreba poznavanja površine Zemlje, međusobnog približavanja i što racionalnije organizacije i korištenja prostora.

Pored naših unutrašnjih problema, i tehnički izmijenjeni uvjeti poznavanja objekta i obrade naučnih problema traže adaptacije i razvoj

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¹ K. B. Cumberland, Why geography? New Zealand Geographer, V. XII. N. 1, Auckland 1956, p. 2.

² K. B. Cumberland, op. cit., p. 3.

metoda geografskog rada. Tehničkim razvitkom postala nam je čitava Zemlja domovina, a svi ljudi susjedi.

Unutrašnji problemi i etapa općeg razvitka traže raspravu i potrebna prilagođavanja u našoj nauci. Smatram da je uzaludno očekivati jednog ili dvojicu reformatora. U suvremeno doba globalnog života i organiziranog naučnog rada to mogu i moraju učiniti veliki i međunarodni organizmi. To je razlog da mi pokrećemo u ovom krugu diskusiju o nekim baznim problemima naše nauke.

Objekt geografskog istraživanja — Tokom proteklih 100 godina izdvojile su se iz enciklopedijskog geografskog gledanja mnoge posebne nauke (meteorologija, geofizika, hidrologija, pedologija itd.). Pojedincu je nemoguće, a u našem slučaju i nepotrebno, da svlada naučne metode i upozna objekt svake od ovih disciplina. Na žalost i dalje, međutim, ima tendencija da se nastavi klasičnim enciklopedijskim smjerom što nužno dovodi do nenaučnosti, laicizma i škodi općem ugledu naše nauke. Ima nas i takvih koji hoće da ostanu geografi, ali da se bave izoliranim elementima geografskog objekta; položaj je tih naročito delikatan, jer — možda i nesvjesno — sijeku vezu s geografijom i unose zabunu, a specijalizirane nauke ih neće primiti kao svoje.

Dok različite nauke proučavaju izdvojene elemente i faktore prostornog inventara, složena, raznolika i promjenljiva prostorna stvarnost ne može biti objašnjena na taj način. Kombinirana prostorna slika površine Zemlje objekt je općeg interesa i traži naučnu obradu i objašnjenje. Mi se uglavnom slažemo da je to objekt izučavanja geografije, ali primjenjujemo ne samo različite već i divergentne metode naučnog rada. Iako veoma složen i raznolik a u vremenu promjenljiv, geografski je objekt jedinstven i realan, te i nauka koja ga proučava mora imati odgovarajuće kvalitete.

Očito je da još nije utvrđena adekvatna naučna metoda, jer bi se u tom slučaju ona morala odvojiti i dala bi rezultate koji bi zasjenili i potisnuli druge. Možda i nije moguće utvrditi fiksnu i općenitu metodu geografskog rada, ali ako to konstatiramo, postići ćemo velik rezultat i bazu za dalji napredak. Rasprava o metodološkim problemima najveća je a vjerovatno i najbitnija potreba geografije.

Metode naučnog rada i tretiranja geografskog objekta — odražavaju naslijeđa prošlosti, opći naučni razvitak, društvena gledanja i unutrašnju naučnu nesigurnost. Za ocjenu današnjeg stanja važan je pogled u razvoj naučnog geografskog rada tokom proteklih 100 godina.

Naučna geografija pred jedno stoljeće počinje utvrđivanjem uzroka prostornim pojavama. Kauzalističko gledanje zapravo jeste bit naučnog preokreta početkom 19. stoljeća i donijelo je prirodnim i eksperimentalnim naukama velik napredak i preobrazilo društvene odnose. Kauzalistički postupak je i analitički; lakše i uspješnije se primjenjuje u disciplinama koje studiraju izolirane objekte.

U nedostatku vlastite naučne metode prilagođene njenom objektu, geografija je zaostajala i uzimala rezultate i činjenice iz susjednih nauka

ili su i sami geografi pribjegavali tuđim metodama i tuđem objektu. U isto su doba veoma ugledni predstavnici srodnih struka konstatirali da njihove naučne metode ne mogu objasniti prostorne raznolikosti i prilazili su geografiji i mnogo pridonijeli njenom ugledu i razvitku.

Nisu postignuti ni unutrašnja homogenost ni naučni ugled. Početkom ovog stoljeća počeli su ozbiljni prigovori o opravdanosti postojanja geografije, naša disciplina ne privlači željeni i potrebni naučni podmladak.

Nakon prvoga svjetskog rata jača specifičan i adekvatniji geografski metod funkcionalnog studija elemenata i faktora u prostornim pojavama. Ovaj težak metod utvrđivanja sadašnjih stanja i međusobnih odnosa nužno traži i upoznavanje razvojnih etapa, te daje solidnu osnovu predviđanja budućeg razvitka. Ova je etapa dala klasična djela regionalne geografije (neki svesci »Geographie universelle«, N. Krebs, »Indien« i sl.).

Suvremena dostignuća učinila su nam dostupnima prostorne slike i odnose gotovo na cijeloj Zemlji, čime se pokazala netačnost mnogih koncepcija i pravila koja su deducirana iz parcijalnih poznavanja. Poređenje funkcionalnih odnosa različitih kombinacija geografskih elemenata i faktora i prostornih slika koje iz toga rezultiraju omogućava utvrđivanje toka i pravila složenog geografskog procesa. Pored utjecaja neposrednih prirodnih elemenata i društvenih faktora, progresivne snage svjetskog zbivanja sve više utječu na pojave na Zemljinoj površini. Svjetski socijalni procesi i moćna tehnička sredstva potiskuju povijesnu izoliranost i ovisnost o prirodnoj sredini. Pod ovim vidom osvijetljena i postignuta geografska znanja uživaju naučni respekt i imaju najveće praktično značenje.

Spori razvoj naučne metode, pored objektivnih uvjeta, odražava i unutrašnje poteškoće. Mi ne možemo biti zadovoljni nedavnom konstatacijom da se geograf postaje sa 70 godina.³ Treba utvrditi i primjenjivati nove i adekvatnije metode geografskog izobražavanja i naučnog rada. Naše unutrašnje slabosti olakšavaju utjecaje izvana i ogledaju se u različitom tretiranju geografskog objekta.

Već su se dva inicijatora naučne geografije međusobno bitno razlikovala i te razlike su karakteristične za geografiju.

C. Ritter ustraje na filozofsko-religioznim koncepcijama 18. stoljeća, a u prostornim odnosima konstatira prirodno-kulturnu uvjetovanost i teleološki razvitak. Literalni podaci za njega su važniji od direktnog poznavanja prostornih kombinacija, smatra da kontakt s objektom može zbuniti i voditi u subjektivističku površnost.

Suprotno A. von Humboldt crpe svoja znanja i deducira koncepcije iz neposrednih spoznaja. Pionirske i mnogostruke spoznaje nisu mu dozvolile koncentraciju, ali konstatacija činjenica omogućila je opravdane zaključke od kojih su mnogi vječne vrijednosti.

I u sadašnjem vremenu imamo sljedbenike jednog i drugog smjera, ali sa ekstremnijim stanovištima. Dok se Ritter zadovoljava logičnim

³ M. Sorre, Orientation actuelle de la géographie humaine, Norois, A. 1, N. 2. Rennes 1954, p. 113.

dedukcijama, ima nas koji tražimo i kruto matematičko određivanje razvojnih procesa, iako su stvarne kombinacije neiscrpne.

Dva pionira naučne geografije jesu inicijatori i dualističkog smjera u geografiji. Humanista C. Ritter inicira »kulturnu geografiju« koju će kasnije F. Ratzel razviti u »antropogeografiju«, a prirodnjak A. von Humboldt govori o »fizičkoj geografiji«. Kod ovih a i kod drugih inicijatora naučne geografije može se govoriti o isticanju jednog aspekta geografskog objekta, ali oni su se interesirali za geografski kompleks kao cjelinu, što je i odgovaralo njihovoj kulturi. A von Humboldt piše o kulturnim i političkim problemima, F. Ratzel je prirodnjak, što izvjesno i utječe da je dao odlučujuću ulogu okolici; historičar V. de la Blache odlično naglašava potrebu prirodnjačkog obrazovanja geografa, što je pokazao i primjerom.

Naprotiv, sada imamo zastupnike geografskih škola, koji odlučno izdvajaju fizičku geografiju kao prirodnu nauku, a »društvenu« (dozvolite, da je tako nazivam) odnosno »ekonomsku« geografiju kao društvenu ili humanističku nauku. Dvije discipline bile bi dakle potpuno izdvojene predmetom i naučnom metodom. Iako se tako odlučno zastupaju polazne postavke, nije se moglo logično poći dalje i priključiti različite geografije odgovarajućim grupama nauka. Obje su geografije ostale organizaciono povezane u istom institutu ili fakultetu i sa zajedničkim programom. Geografski objekt je jedinstven; ako se tome ne prilagodi naučno geografsko gledanje, trpe interesi i ugled geografije, kao što su to konačno priznali i sami inicijatori spomenutog izdvajanja.

Dualističko gledanje na geografiju odražava zastarjelu i nerealnu podjelu nauka: »Ni geografija ni geografi nisu odgovorni za arhaički formalizam u definicijama i klasifikacijama nauka u literarne (humanističke) i naučne (prirodne)«, kaže jedan istaknuti predstavnik suvremene geografije.⁴ Geografija je upravo najbolji dokaz nerealnosti spomenute podjele nauka. Golemi grad je ne samo prirodni elemenat, već i modifikator — mijenja sastav nižih dijelova atmosfere, klimatske osobine, vode, biljni pokrov okolice itd. Obradeni prostori, prometni uređaji, kanali, baražna jezera također su elementi i modifikatori prirodne sredine.

Problem priključenja geografije prirodnim ili društvenim naukama nije samo specifikum geografije, već je to teško provesti i kod eminentno prirodnih nauka, na pr. kod kemije.

Mnogo su važniji i za nas specifičniji problemi koje odnose divergentne specijalističke tendencije. Studiranjem samo jednog i izdvojenog prostornog elementa razvijaju se i odgovarajuće tehnike rada. Tim su razvitkom iz enciklopedijske geografije izdvojene danas osamostaljene nauke. Hoće li neke današnje tendencije doživjeti isto priznanje, nije za nas bitno, ali su one sa stanovišta geografije opravdano okarakterizirane kao »samoubojstvo«.⁵

⁴ J. Dresch, La géographie physique et technique, Bulletin de l'Association de géographes français, No. 270, Paris 1958, p. 48.

⁵ J. Dresch, op. cit., p. 48.

Među nama veoma je popularno isticanje kompleksnog proučavanja, koje kao naučna metoda nije dovoljno precizirano, a vjerovatno to nije ni moguće.

Sintetička metoda bitna je za regionalne studije. Mnogi među nama, osobito »specijalisti«, gledaju na ovaj dio geografije s potcjenjivanjem, možda zbog nepopularnog nasljeđa kozmografskih prepričavanja ili zbog nesuvislih nabiranja statističkih podataka i imena u fazi enciklopedijsko-leksikografske geografije. Međutim, bitna je i nužna konstatacija da su takve »geografije« odgovarale vremenskim mogućnostima i zadovoljavale velikoj društvenoj žedi za geografskim znanjima. Geografija koja obrađuje prostorna stanja i odnose, vječna je i mi smo svjedoci da ju razvijeno društvo još više treba i traži.

Neosporno je da tzv. regionalna geografija, a ja bih rekao baza geografije, ne raspolaže odgovarajućom adekvatnom naučnom metodom. Ovo je stanje i razumljivo, jer regionalna proučavanja ne mogu koristiti metode sistematskih nauka. Treba razviti vlastitu metodu rada, što ima velikih objektivnih poteškoća. Metode regionalnog, odnosno geografskog proučavanja ne mogu biti konstantne, jer je objekt, koji istražujemo, u prostoru raznolik a u vremenu promjenljiv. Zapostavljanje ovog našeg specifičnog, tj. regionalnog studija odražava se u organizaciji univerzitetskih katedri i na našim kongresima. Da li zapuštanje i potcjenjivanje tzv. regionalne geografije ne znači i skretanje sa težeg puta?

I pored svega izloženog, važno je konstatirati da su geografska djela najtrajnije vrijednosti iz grupe regionalnih istraživanja. Javnost i naučni svijet ocjenjuju našu nauku prema vrijednosti regionalnih radova. Napokon, regionalna istraživanja imaju centralno i izvorno značenje u našoj nauci. Iz njih proističu i na njima se provjeravaju naša opća gledanja.

Regionalna su proučavanja omogućila utvrđivanje funkcionalnih odnosa i razvojnog procesa i postala izvor specijalističkih geografskih saznanja i grananja. Iz regionalnih su studija proizašli principi i pokazale se prednosti specifične i složene geografske naučne metode. Studijem kombiniranog značenja tektonskih i klimatogenih procesa i stava terena revolucionarno je unapređeno poznavanje reljefa, konkretnost regionalne klimatologije potiskuje složene i nerealne sheme; regionalna saznanja daju osnovu za osvjetljivanje i provjeravanje historijskih fakata i otvaraju veliko i privlačno polje historijskoj geografiji; distinkcija među kultiviranim i prirodnim tlima proizlazi iz njihova prostornog značenja i očito je za nas važnija od pozajmljenih pedoloških podataka itd.

Ova povezanost metodskih problema i naučnih interesa proizlazi iz biti naše struke i pokazuje gdje moramo koncentrirati napore.

Metodski problemi geografije nisu nikada dosada bili tako akutni, te je logično da su privukli odgovarajuću pažnju, diskusiju, a ponekad i zabrinutost. Ovo stanje odgovara značenju naše nauke i stupnju razvitka, koji pruža i odgovarajuće mogućnosti rješenja problema.

Ne samo da nam je kompleksan geografski objekt postao pristupačan, već smo se i mi geografi i bolje upoznali, te konstatiramo shvatljive međusobne razlike. Izmjena mišljenja i iskustava, poređenje metoda i rezultata olakšavaju izbor najboljeg naučnog puta i uspješno zadovoljenje općeg interesa za geografskim znanjima. Raznoliki i promjenjivi objekt traži stalnu suradnju i razvijanje naučnih metoda.

Ove bazne diskusije eminentan su predmet za međunarodne geografske kongrese, a Međunarodna geografska unija treba da osigura stalne kontakte. Veoma je sretno da se ovi problemi pokreću sada kada postoje i objektivni uvjeti da se povoljno riješe, jer prevladava dobra volja za pozitivnu međunarodnu suradnju. Geografija i zbog opsega svog objekta i humanog aspekta svog gledanja treba da bude protagonista međunarodne suradnje.

Ako 19. međunarodni kongres posveti odgovarajuću pažnju i dade poticaj za rješavanje osnovnih problema geografije, dostojno će označiti 100-godišnjicu naučne geografije i biti inicijator bržeg i adekvatnog razvitka naše nauke.

OM SOME BASIC PROBLEMS IN GEOGRAPHY*

JOSIP ROGLIĆ

Last year the whole world celebrated the centenary of the death of the encyclopaedist, naturalist and explorer Alex. von Humboldt. We geographers also celebrated the centenary of the death of the first university professor of geography, Carl Ritter. Both of them we consider to have been pioneers of scientific geography, and we cannot separate their centenaries from a discussion of the present problems in our science.

The beginning of scientific work in geography was connected with the achievements of that period. Modern methods of survey had already been adopted and they had at their disposal the first topographic maps; a new state service published an inventory of space-data and the changes in it. Scientific work began by applying exact and critical methods; it was to finish with impressionist descriptions and wrong deductions.

In the past hundred years we have made great advances in the knowledge and study of geographical objectives, but in different and even in neighbouring countries, this progress has been unequal and methods have varied. For large parts of the world, great in area and in population, true scientific work could not begin because the sources of scientific documentation were non-existent or not available.

Persistence along traditional lines, the aforementioned differences of objective, internal divergent tendencies, and insufficient international exchange and discussion are reflected in the big differences of viewpoint within scientific geography: there are essential differences not only

* This paper was communicated at XIX. International geographical congress at Stockholm in August 1960. and in Geographical Society of Croatia on 12 December 1960.

between the geographies of different countries but also between the various university schools of geography in the same country. The statement that we have »more geographies, than geographers«¹ may sound an exaggeration, but it is true and for us deplorable that our »subject is not likely to find favour, respect and acceptance amongst the other disciplines so long as that argument i. e. What is geography? concerns the very basis and nature of geography«.² The science which studies the world around us and demonstrates our position in it does not yet hold a rôle corresponding to its importance in present-day life, in spite of the fact that all people agree that the knowledge of the earth's surface is the basis of international rapprochement and of rational organisation and good land use.

Apart from the internal problems of our subject, the advanced technical means now at our disposal for getting a knowledge of geographical facts, and for studying scientific problems, demand the adaptation and improvement of geographical working methods. Technical advances have made the Earth our home and all men our neighbours.

Subjective and objective reasoning now calls for discussion and the necessary adjustments in our science. We believe that it is vain to expect, in the present conditions of global life and complicated scientific methods, that the adjustment can be made by one or two reformers alone: it requires an outstanding international organisation. For that reason, we would initiate in this company the discussion of some basic problems in geography.

The Objects of Geographical Study — During the past hundred years many sciences have split off from the encyclopaedic science of geography and have developed their own methods of study (meteorology, geophysics, hydrology, pedology, etc). One man cannot, and in our case does not need, to master all of the scientific methods and to acquire some knowledge of the objectives of all these studies. There is still a tendency, however, to continue in the classic course of encyclopaedism, which logically leads to the profanation of geography and is harmful to its scientific prestige. There are many people, especially among the young, who would be geographers; but they limit their studies to one isolated element in the geographical complex. This tendency is delicate and dangerous, because such people, probably inadvertently, cut their connection with geography and cause it to be misunderstood. The probability is small that they will be accepted by the specialists as being of their own select companies.

Whilst each of the systematic sciences studies isolated elements and factors in the inventory of the earth's surface, the complex, diversified and changing surface of the earth cannot be understood in this way. The whole of the earth's surface — its combined landscapes and regions — is an object of general interest and needs scientific study and explanation. We are agreed that the surface of the earth is the factual material

¹ K. B. Cumberland, Why geography? *New Zealand Geographer*, V. XII, N. 1, Auckland 1956, p. 2.

² K. B. Cumberland, *op. cit.*, p. 3.

of geography, but we apply not only different but also divergent methods to its study. In spite of its complexity, the great range of its differences, and their liability to change with time, the object of geographical study is one and real, and the science that studies it must have corresponding qualities.

It is clear that we have not at our disposal a single outstanding geographical technique, which, by the superiority of its results, would take precedence over and replace all the rest. It may be that it is not possible to devise one scientific method to suit all geographical purposes; but our discussions could be the basis of further development. The discussion of methodological problems is, we believe, the greatest and most essential task in geography.

The Different Approaches to the Facts of Geography and the Methods of Scientific Work — reflect heritage, general progress, leading social and political ideas, and inner methodological incertitude. A knowledge of these things is necessary to an understanding of the present stay in our science.

A hundred years ago, scientific geography began by seeking and stating the causes of the earth's surface phenomena. Causalistic judgement was the essence of the scientific revolution at the beginning of the nineteenth century, and it brought great advances to the natural and experimental sciences and changed social relationships. The causalistic procedure is also analytic: it is easier and more successful to apply this method in disciplines which study isolated elements. In default of a scientific method appropriate to its objectives, geography did not make progress of its own. It relied on the results and statements of cognate disciplines or, in some cases, geographers adopted the methods and limited objectives of strange disciplines. It is very significant that at the same time outstanding representatives of the related sciences admitted that their own methods had not proved successful when applied to the explanation of spatial phenomena. They came over to geography and did very much for the advancement and prestige of our science, in spite of which it has been impossible to get the internal homogeneity and reputation necessary to attract desirable students. At the beginning of this century there were also serious criticisms from the outside that our science lacked unity and *raison d'être*.

After the first World War, the specific and more appropriate method of functional study of the geographical elements and factors gained ground. This difficult method, which deals with the present stage and mutual relationships between the components, implies a knowledge of the past stages and gives a good basis for forecasting future evolution. This method gives practical meaning to the study of geography, and its application gave rise to many excellent regional studies.

Contemporary achievements threw light on the conditions and inter-relationships of almost all parts of the surface of the earth, and showed that many previous conclusions and general concepts built on insufficient knowledge were wrong. The comparison of different surface phenomena

and the study of internal combinations and functional relationships between natural elements and social factors, gave the opportunity of establishing the existence of a geographical process. The surface phenomena reflect, beside relations between natural elements and social factors, more and more active forces of world life. Active social forces and technical means reduce the importance of historically conditioned isolation and dependence on the natural environment. The results of this complex geographical study are scientifically respected and have great practical value.

The slow evolution of scientific method in geography surely reflects (as well as the objective conditions) the inner difficulties and weaknesses. We cannot rest content with a statement that to be a good geographer one must be seventy years old.³ It is essential to find and apply new and more convenient methods of geographical training and scientific work. Our inner difficulties facilitate the penetration of outside influences and are reflected in the differences of approach to geographical objectives.

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Already two founders of scientific geography have practised different methods and these differences are very characteristic of our subject.

Carl Ritter inherited the philosophical-religious concepts of the eighteenth century and saw geographical relationships as the natural and historical conditionality of a teleological development. He finds that the literary data are more important than a direct knowledge of the phenomena, and believes that contact with the object can embarrass, or lead to a subjective interpretation.

A. von Humboldt, on the contrary, got his knowledge from and based his general concepts on direct contact with the objects of study. Pioneering many different branches of knowledge made it impossible for him to concentrate on any single one, but his first-hand knowledge of the facts gave him the opportunity of drawing justified conclusions, many of which are of lasting importance. We still have with us the representatives of both schools, sometimes advocating their views with much obstinate exaggeration. While Ritter was partial to logical deductions, there are protagonists of a theory of rigid mathematical determination of evolutionary processes; yet geographical combinations are unlimited.

The two founders of scientific geography are also responsible for initiating its dualism. Humanist C. Ritter had initiated the »cultural geography« which F. Ratzel developed into »anthropogeography«. The naturalist A. von Humboldt speaks of »physical geography«. These three, and others of the founders of scientific geography, each laid stress on one aspect of geographical study, at the same time maintaining their interest in the whole complex. Von Humboldt wrote on cultural and political problems; F. Ratzel, a trained naturalist, promoted human

³ M. Sorre, *Orientation actuelle de la géographie humaine*, Noreis, A. 1, N. 2 Rennes 1954, p. 113.

geography; historian V. de la Blache pointed out the importance for a geographer of training in the natural sciences; and so with others.

To-day we have schools of geography which resolutely separate physical geography as a natural science, and »social« — we like to use this adjective — or economic geography as a social or human discipline. This means that the two disciplines are completely separate in objectives and research methods. Yet the object of geographical study is one, and if we do not have a specific method of investigation then the interest and scientific reputation of our science will suffer, as was indeed realised by the representatives of this separation.

The dualistic division within geography reflects an obsolete and unjustifiable grouping of the sciences: »Ni la géographie ni les géographes ne sauraient être responsables du formalisme archaïque de définitions et classifications en disciplines littéraires et scientifiques« writes one outstanding representative of contemporary geography.⁴ Geography well demonstrates that the dual grouping is unjustifiable. For example, large cities are also natural facts, and they modify the composition of the lower atmosphere, the climatic conditions, the reserves of groundwater, the vegetation in their neighbourhood, and so forth. Cultivated surfaces, traffic installations, reservoirs all modify and change the natural environment and re-condition human life.

The problem of association either with the social or with the natural sciences is not a specifically geographical one, but now affects what were once regarded as purely natural sciences, such as chemistry.

More serious and for our subject more typical are the divergent specialistic tendencies. Studies of a single, isolated spatial element or factor have been elaborated, as have the appropriate methods of research. By this process, many disciplines have been separated from geography and are to-day completely independent. It is not essential for us to know which, if any, of the present divergent tendencies will give rise to disciplines with a similar status. From the point of view of the parent subject, the process of fission is justifiably judged as »suicide«,⁵ and we geographers must accord it the attention it deserves.

It is popular among geographers to emphasise the complexity of our subject, but as a scientific approach this is not enough difficult as it is to be more precise. Synthetic consideration and judgement are essential, in regional studies specifically. There are geographers, mostly »specialists«, who undervalue this part of their subject, probably on account of unpopular heritages of cosmographic fables and incoherent enumeration of statistical data and geographical names when geography was in its lexicographical stage. But it is necessary to state that those »geographies« were in accord with the contemporary opportunities, and they slaked the general thirst for geographical knowledge. Geography which explains the conditions and relations of the world around us is e t e r-

⁴ Dresch, *La géographie physique et technique*, Bulletin de l'Association de géographes français, No. 290, Paris 1958, p. 48.

⁵ J. Dresch, *op. cit.*, p. 48.

nal, and we know that advanced societies need and seek more of this knowledge.

Certainly »regional geography« or, I should say, the basis of geography, has no scientific methods individual to itself. This lack is to some extent understandable, because regional studies cannot make use of the methods of the systematic disciplines. We need to develop methods of study which cannot be inflexible because the object of study is so much differentiated and changeable. The neglect of this, our specific study, is reflected in the organisation of university chairs of geography and in our congresses. Can this neglect and undervaluation of the basis of geography mean that it has been avoided as the more difficult way?

In spite of all, it is very important to state that the geographical works of most enduring value are regional studies, that the general public and scientific world judge our science according to the quality of these researches, and finally that regional studies have a central position in our science. They are the source and verification of our general pronouncements. A regional study gives opportunities to state functional relationships and to prove the evolutionary nature of geographical processes. On regional studies we base the principles and demonstrate the priorities of specific and general geographical viewpoints. By studying the combined rôle of tectonic movements, climatogenic processes, and the rocks, we revolutionize the knowledge of relief. The reality of regionally-ascertained climatic facts replaces deduced schemes and insignificant formulae. The regional facts enable us to throw light upon and verify historic events; this opens a large and very attractive field of research in historical geography. The distinction between cultivated and natural soils is determined on the basis of their regional disposition and economic significance, and this surely is more convenient than borrowed pedological classification; and so on.

This connection between regional knowledge and successful specialistic orientations reflects the nature of and priorities in our science and shows where we must concentrate our efforts.

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We have mentioned only the most significant and fundamental of the problems in geography: here is not the time nor place to discuss them all. These problems were never so acute, and it is understandable that they cause a corresponding amount of discussion and sometimes anxiety. That this should be so shows the nature and importance of our science. We have reached a stage in general progress which gives new opportunities for solving some of these problems.

Recent technical achievements have not only made the big and complicated field of geography more accessible, they have also brought us geographers together, have made us better acquainted with one another and put us in a position to clarify our disagreements. An exchange of view-points and experiences, and the comparison of methods and results, facilitate the selection of the best scientific methods and the satisfaction

of the general thirst for geographical knowledge. The differentiation and the changes within the earth's surface demand constant cooperation, as well as improvements in the methods of research.

Such basic discussions are an outstanding topic for international congresses. To the International Geographical Union falls the responsibility for assuring these constant contacts. It is fortunate that these problems arise to-day, when the prevailing atmosphere of international scientific goodwill and co-operation favours their solution. Geography, on account of the dimensions of its field and the humanity of its viewpoint, must be a protagonist of international cooperation.

If the nineteenth International Geographical Conference gives adequate attention to the solution of the aforementioned problems in geography, it will be the best possible celebration of the centenary of scientific geography; and it will mark the beginning of faster and more adequate progress in our science.