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# **Agrarwissenschaften der Tropen und Subtropen**

**Perspektiven des deutschen Beitrages**

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# Positioning German Higher Education for a Strengthened North-South Dialogue

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## 1. Introduction

The occasion of this meeting is the hundredth *dies natalis* of the former German Colonial School (Deutsche Kolonialschule) in Witzenhausen. Much has changed since those days. Germany has long since given up its colonies but has assumed around 10% of the ODA-burden world-wide. Where fifty to a hundred years ago the world offered few alternatives to Germany for those wishing exposure to the brightest minds, to date Germany finds itself increasingly ignored by international scholars, as witnessed by the very low percentage (less than 5%) of international students enrolled in German institutions of higher learning. If the national goal of doubling this percentage is to be reached without stooping to just accepting those students no one else wants, some changes will be necessary. We will analyze some of these changes here and look across the border to see how Germany stands compared to some of its competitors.

## 2. The Humboldtian tradition

The German Research University represents the Humboldtian principle of „unity of research and teaching“. With the increasing demand for education in the sixties these Universities were initially expanded to incorporate engineering colleges and teacher training colleges which gradually became part of the unitary university system. With ever increasing student numbers the „Fachhochschul“ sector developed which typically trained mid-level civil servants for the so-called higher civil service (Gehobener Dienst). In most cases these evolved by upgrading of existing specialized learning institutions, in which research played an insignificant role. In the late seventies (Hochschulrahmengesetz 1976) the "Fachhochschul" sector was seen as a first step in an evolution towards an integrated higher education system. In the eighties this policy was reversed and the "Fachhochschul" sector was confirmed as separate and with different tasks and goals. By that time, however, some integration had taken place culminating in the establishment of some Integrated Universities (Gesamthochschulen).

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Witzenhausen is a living example of the ambiguity of the German educational system. As the need for practically trained middle cadre technicians for the colonial territories faded, the school assumed new responsibilities, including the training of agriculturists for the emerging, independent third world states with their largely agriculture based economies. Similar conversions, though implemented later, were seen in other ex-colonial powers, e.g. the tropical agricultural school in Deventer, the Netherlands. The emphasis remained on practical training until, in the late sixties with the success of the green revolution, the awareness grew that research had a crucial role to play in solving the food security problems in the developing world. In Germany, however, the agricultural faculties of the Universities quickly filled that void and established chairs dealing with tropical agriculture and rural development, leaving the "Fachhochschul" sector seeking its place, next to these chairs with the tradition and facilities to adhere to the Humboldtian principle. A clear government policy on how to regain the higher ground in international scientific exchange remained poorly defined and within this, the role Germany wanted to play in the North-South dialogue remained vague. May be Germany was simply reluctant to enter into the international dialogue on the role of the industrialized world in development assistance and to prolong former colonial policy through the university system. This might have compromised the independent position of the university, so valued in the Humboldtian tradition.

### 3. Clarks triangle

The mechanisms operating in the dynamism of higher educational systems may be complex. In an early analysis, Clark (1983) recognized three of these forces as being the state authority, the academic oligarchy and the market. Based on his analysis of a series of countries he constructed a triangle and placed the various university systems of these countries within it, based on the level of influence each of these forces was exerting on the system (Fig. 1). Although not considered by Clark, a study conducted by CHEPS (undated) for the Bertelsmann Foundation places Germany's university system firmly between the State authority and academic oligarchy. Legal constructions and regulations are firmly in the hands of the State whereas, particularly with regard to research where academic freedom is the rule, the system lands closer to the academic vertex. There are surprisingly few or no market forces operating in the system. Moreover, the German system is remarkably resistant to change, due in part to the lack of institutional autonomy, with deans and presidents serving as *primus inter pares* and lacking the power of a chief executive. It is of interest to observe the movement of the Australian university system within Clarks triangle over the past few decades, moving increasingly in the direction of the market (Fig 2), joining Canada and the USA which have traditionally seen higher education as a marketable good. Similar moves are seen in other countries, e.g. England, and this has a direct bearing on the role German institutions of higher learning can play in attracting foreign scholars, particularly those from developing nations.

Fig. 1: Selected countries in Clark's triangle of coordination (Clark, 1983)

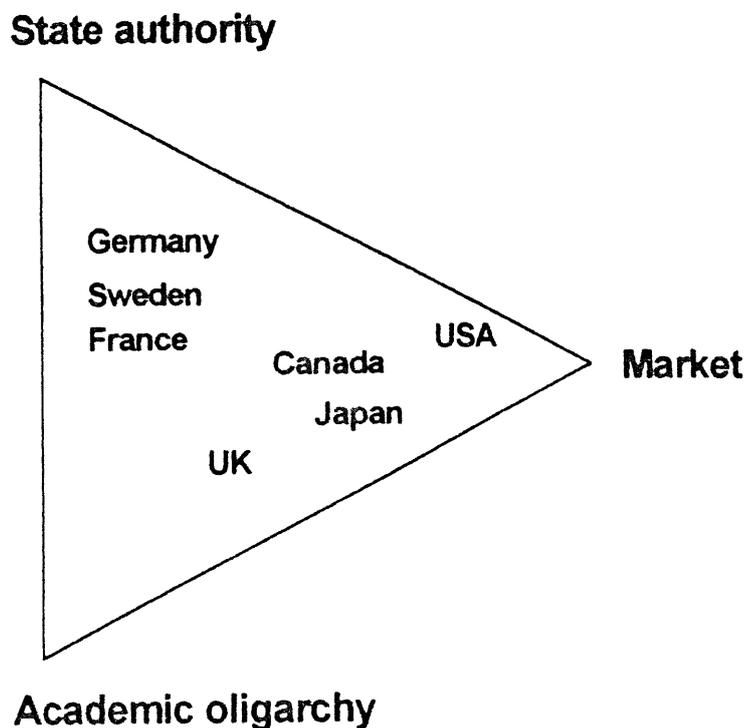
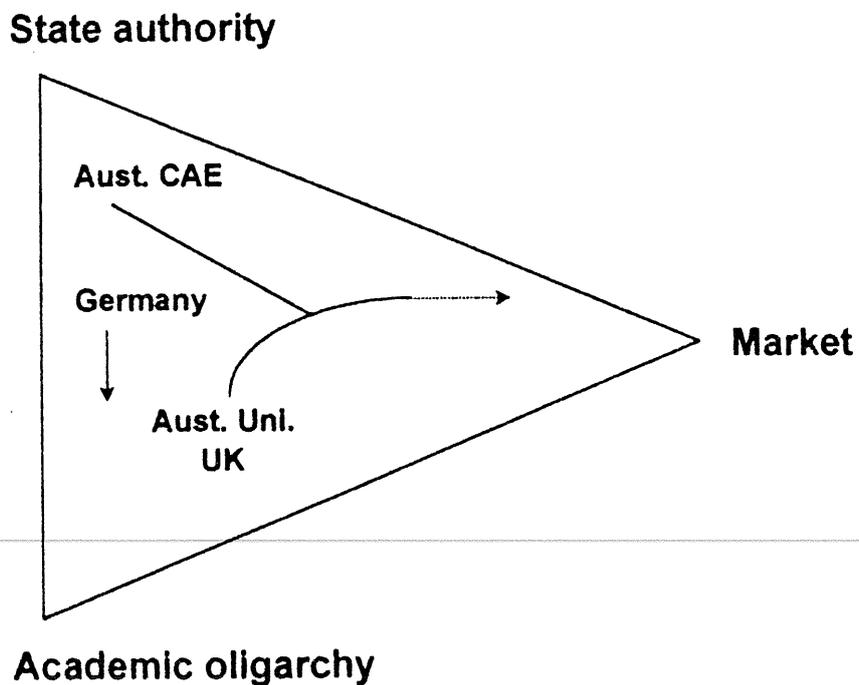


Fig. 2: The movement of Australian higher education (Clark, 1983)



German higher education remains free of charge. Without entering the debate of whether this situation is tenable, the question arises as to how and why German institutions should get involved in an increasingly aggressive field of players trying to sell their goods in a market that is willing to pay. Not only are an increasing number of third world countries able and willing to pay for such services, but those that are not, are using scholarship funds offered by international organizations (to which Germany contributes) to purchase education overseas for their nationals. There is no incentive for German universities to enter this market as it offers them little to compensate for the marketing costs. Thus, what have become multi-million dollar industries to many anglophone universities is largely untapped by the German system to date. Could Germany compete?

There is little doubt that first class education can still be obtained in Germany. However, German degrees lack the international recognition necessary to make it easy to enter for outsiders or transfer back into other systems. Although great strides are being made to promote mobility amongst European Union institutions, mobility worldwide remains a problem for a number of European countries. Arguing with an American institution that a European curriculum of 4-5 years should qualify graduates for entry into their doctorate program is occasionally successful but does not guarantee acceptance. Placing graduates from, for instance, the University of the Philippines Los Banos in the third year of the German education system, with the possibility that the Dipl.-Ing. degree will not give automatic entry to a Ph. D. program back home is little incentive to even apply. Under these conditions no one should be surprised that the best scholars end up elsewhere and often only those left out are finding their way to Germany. The problem is not unique to Germany, but other countries in Europe have dealt with this issue more forcefully.

For instance, Denmark, in a major reform of its university system abandoned its traditional 5-year University degree called the „Kandidat“ and now offers a three year B. Sc. followed by a 2-year M. Sc. Degree. The degree system was changed without major changes in how and what is being taught thus maintaining the character of „continental“ education while assuring compatibility with Anglo-Saxon systems. The new draft of a „Hochschulrahmengesetz“ in Germany would allow a similar change, but stops short of mandating it on a system-wide basis. Some faculties in Goettingen, for instance Geowissenschaften, have made the change in anticipation of the laws passing, while others such as Agrarwissenschaften and Bodenwissenschaften are in the preparation phase for similar reforms. Once implemented, the Agricultural Faculties in Witzenhausen and Goettingen will have moved closely together with each offering a three year B.Sc. degree, whereby Witzenhausen requires 12-year schooling for entry as compared to 13 in Goettingen. Witzenhausen provides the option to continue in a 1.5-year M.Sc. program. In Goettingen the same would take an additional 1.5-2 years. Given the increasing congruence in degrees, their proximity, and the traditional common interest in Tropical Agriculture, it is only logical that the two Universities are discussing joint efforts in order to create a highly attractive learning environment for students and scholars from tropical regions.

Recognizing the need to strengthen national universities in the developing world, the German government essentially stopped financing the education of third world students below the M. Sc. level in the early nineties. Whereas Witzenhausen was

negatively affected by this new policy, the agriculture and forestry faculties in Goettingen took advantage of their existing 2-year *Aufbaustudium* (M. Sc. agr.) to accept Third-World university students and German "Fachhochschul" graduates with good B. Sc. exams. Such academic training in tropical agriculture today is considerably different from that offered in the past. Traditionally such training was highly empirical and skill oriented. The new educational programs increasingly concentrate on concepts, methodologies and generic interdisciplinary knowledge. An academic with that kind of specialization will add value to the professionals that are trained in their home country.

A 1.5-year M. Sc.-program in various areas of tropical agriculture was quite successfully implemented years ago in Wageningen, The Netherlands. The number of students asking access are multi-fold the number of students accepted in the various courses. A concerted action to upgrade and update the programs make them even more attractive. An extensive scholarship program to meet the demand is more and more indispensable. Another advantage of this M. Sc.- system is the combination with the Ph. D.- programs. These programs are now organized in an individual mode and through formal Ph. D.- programs in so-called research schools. The possibility to extend the MSc training into a Ph. D.- training is in many cases appealing to students from abroad. From the viewpoint of the university there is the advantage that performance of students in the M. Sc. phase at Wageningen provides an excellent selection criterion for PhD candidates.

The annual number of students in the Goettingen program grew from 10 yearly to over 40. Other universities with similar programs saw similar growth while others again recognized the market niche and started similar programs. The program provides quality education with a world-wide recognized degree, qualifies those with a good exam for doctoral studies in Germany or elsewhere, and provides German students with a tropical interest exposure to foreign cultures, while foreign students are exposed to the German culture and system of education. The Goettingen experience shows that there is a large demand (around 250 applications a year) and a high level of satisfaction. Further growth is largely restricted by the limited capacity of the staff. It is here that collaboration between Witzhausen and Goettingen may be truly beneficial.

#### **4. German as a cultural (dis)incentive**

Debate continues whether students should be allowed to hear lectures or write their thesis in a language other than German. Wide discrepancies exist among and within Universities as Faculties are often independent in their decisions. Whereas it is understandable that a Faculty requires a dissertation on Goethe to be in German, there seems to be no other than sentimental arguments to require the same in chemistry or agriculture. The insistence on PnDS from prospective students from abroad tends to be a hurdle that discourages promising students from considering German universities. Those not accepted by anglophone or francophone systems may apply in Germany and be accepted by default. There is no proof for the argument brought by

Prof Berchem (Forschung und Lehre 1/98) that those applying in Germany have made a positive choice for Germany and against anglophony.

The argument that students would not be capable of benefiting from course offerings holds true for M. Sc. Students. Course offerings for Ph. D. students are virtually non-existent and the major activity in which scientific exchange does take place at this level, the seminar, could (or should) easily be handled in English. The thesis language restriction and PnDS requirement is generally unnecessary for such students. The initiation of English-speaking M. Sc. Courses has made it possible for young scholars to become acquainted with the German educational system, while allowing Faculties a close look at some of the potential Ph. D. candidates.

There is no doubt that scholars spending several years in Germany without any German knowledge would miss out on some of the culture and social life that Germany has to offer. However, we have met no students that were admitted to the University of Göttingen, which allows entry as long as English proficiency is given, that did not make an effort to learn conversational German and were not integrated in the community. To a large extent it depends on the open-mindedness of the communities, which take their cue in turn from the Faculties. Dealing with a multi-lingual student population requires flexibility from the host as well as the guest.

A fruitful and competitive international program requires coeducation of persons recruited from the German education system and students from abroad. It requires an explicit adaptation of the curriculum, a well accepted and valued diploma that meets International M. Sc. standards and a scholarship system that is appropriate and attractive. The impulse for such a system would need to come from the federal government with a limited number of faculties/universities as the fore-runners in such a development. The current English-speaking programs being sponsored by the federal government meet some of these requirements but not all.

## **5. The need for directed change**

The latest initiative by the Ministry of Education to financially support universities that are willing to offer English-taught B. Sc. and M. Sc. degrees is a welcome change. A number of attached requirements that need to be fulfilled make it difficult for some programs to meet the obligations that they were willing to promise during the application for these funds. One of these requirements is a 50/50 participation by foreign students and another the requirement that German students spend at least one semester studying in a foreign country. Most problematic is, however, the lack of guidelines on what constitutes a B. Sc. equivalent. The Humboldt University offered to provide a B. Sc. degree in International Development after four semesters and an M. Sc. after a further four. Other faculties, among them Agriculture in Goettingen, will be offering a B.Sc degree after six semesters and require a further 3-4 semesters for an M. Sc. degree. The latter is open to students holding a B. Sc. from other universities. The faculty of mathematics newly offers a similar M. Sc. degree. To complicate things, some universities are offering a one-year so called European Masters de-

degrees. An example is the collaborative European M. Sc. in agribusiness jointly offered by the University of Kiel and Wageningen.

The problem is not unique to Germany. Universities in the Netherlands offer a four year first qualification which the Dutch consider equivalent to an M. Sc. degree and offers access to a Ph. D. program. However, the University of Wageningen offers a 1.5 year M. Sc. program in various tropical fields with English as the language of instruction, which accept B. Sc. graduates from overseas.

With these kind of discrepancies one should not be surprised that potential „customers„ wonder what they are buying into even if, in Germany, they are getting it for free. There is an urgent need to provide some central guidelines that will avoid confusion about the value of the degrees offered. This holds true at the German federal level, but at the European level as well. If these degrees are to be accepted by the Anglo-Saxon colleagues, they should have realistic curricula. Given the 13-year secondary education common in most of Germany, a B. Sc. degree of three years and 1.5 to 2 years for a masters appears justifiable. Not doing so might subject some of the degrees awarded in Germany to the same disrespect we reserve for the one-year M. Sc. degrees offered in the U.K..

## 6. The partnership principle

The quality of education in the field of tropical agriculture in Germany is measured by the number of professorial positions a University can field in this area. In a country like Holland, where hardly any professor positions are currently dedicated to the tropics *per sé*, the expertise in tropical agriculture is presumed to have been embedded in Wageningen during the colonial past. It is perpetuated by an aggressive marketing of M. Sc. courses related to the tropics over the past 25 years, using staff that can look back at several years of tropical experience but not exclusively dedicated to this field. Only few Universities in Germany can muster enough resources in tropical fields to be able to offer degrees in tropical specialties, notably Berlin, Goettingen and Hohenheim. The Wissenschaftsrat recognized this situation and recommended that these three Universities bundle their efforts in order to improve efficiencies and avoid duplication of effort. The process of cooperation so far has not grown beyond the joint organization of an annual meeting (Tropical Days) that are alternately held at one of these Universities. Further development of these ties might greatly improve the profile of Germany's efforts in this area and liberate some energies currently spent on unnecessary competition. One such initiative might be to offer joint in-depth courses of two to three week duration in specific topics that can be taken by students and be recognized for credits by all partner universities.

The University of Kassel (Witzenhausen), which has seen a major restructuring and reorientation over the past few years away from Tropical Agriculture, was seen as a logical partner of the University of Goettingen but was not recommended by the Wissenschaftsrat as a main-stay in tropical disciplines. The State of Hessen confirmed its interest in collaboration between Witzenhausen and Goettingen, which in research is being realized through the initiation of a joint SFB ("Sonderfor-

schungsbereich") on „Stability of the rainforest margin„. In education the collaboration has yet to be given a formal shape, although first discussions have taken place. The prospects of further developments in the field of collaboration are excellent, due to the proximity of the two schools, and may go beyond the special courses proposed above.

Another option could be to strengthen ties with training programs in other countries of the European Union. Such inter-country cooperation has already been initiated between Belgium (University of Ghent) and The Netherlands (University of Wageningen) offering jointly an International M.Sc. course in Aquaculture. The inter university collaboration in Europe could further be used to build ties with some short course training programs, M.Sc. courses and on the job training, at selected universities in the developing world. It seems appropriate to limit the scope of such networks by adopting a few regions or universities and to strengthen the ties with the centres of the Consultative Group of International Agricultural Research.

## 7. The costs and the market place

The West German higher education system had an annual budget before reunification of around 20 billion DM, of which 81% (84% for Universities) was basic subsidies, 9% was competitive grants (only ¼th from private sources) and 10% was student aid, postgraduate study grants etc. The distribution of funding would have changed only marginally since then. The competition for public and private research funds comes mostly from the non-university research institutions which took advantage of the teaching overload that universities experienced in the seventies to obtain a larger piece of the budget pie. Today, universities throughout Germany are experiencing shrinking student numbers, particularly in the sciences and stagnating or declining budget allocations, which are increasingly linked to student enrollment. This trend is creating competitive attitudes among universities not for prestige but for students for which the bureaucratic system is ill prepared. Neither do the universities have the ability to adjust their personnel to changing societal demands, nor do they have the wherewithal to protect, diversify or increase their financial sources or student market share. In a climate in which students were flooding the lecture halls and the governments were willing to bankroll the system, little was invested in alumni organizations, public relations or marketing of the university. The result is reflected in the position Germany takes in the Clark's triangle.

Other countries, notably the Netherlands dealt with a similarly archaic structure in higher education that was considered almost entirely under the state's authority. The inefficiencies of the system, the lack-luster performance of the staff and the slow adjustment to societal change caused a major discussion on change which led, within 2 years (early nineties) to adjustments in the higher education law. Universities were given more autonomy, staff lost automatic tenure privileges, a quality control mechanism was put into place and funding allocations, though more carefully scrutinized, were allowed to be more flexibly used. A greater market awareness was created by allowing Universities to keep their tuition and fees to strengthen their budget. The overall aim was to enable institutions to operate more flexibly, adap-

tively and innovatively in order to attain a higher quality of teaching and research. Many of these changes are overdue in Germany.

The Dutch and Danish experience should be used to move forward more rapidly. Mistakes made in The Netherlands with the acceptance of degrees, too specialized courses and an inadequate mixture of a broad general philosophy in combination with fine tuned individual programs, should be used to have the German system frog leap to internationalisation.

In the United Kingdom, half a generation of Thatcherism converted Universities to aggressive marketers of their services, particularly overseas. Funding strategies for higher education were radically changed in 1988 with a basic core funding pegged to 1989 distribution of funds among universities and the remainder awarded on bids that were evaluated by outsiders and rewarded quality and efficiency. Universities have become more competitive, helped in no small way by the abolishment of tenure. Some attempts to form cartels and fix prices were observed among universities, but not by poly-technics, whereby the latter forced funding per student to be reduced substantially in recent years. What it amounts to is that institutions in Great Britain and the Netherlands are shaped increasingly by market forces as reflected in a definite move to the right in Clark's triangle. Fee income is increasingly substituting for lost central funding, and foreign students are aggressively pursued within this framework to help provide income through highly inflated fees. Help from the British Council with its extensive overseas network provides the United Kingdom with a competitive edge.

Countries like Canada and the United States have a long tradition in diversification and marketing techniques. In addition, they have a far more flexible work force and a centralized management structure that are more suitable for rapid adjustments to real or perceived societal needs. One of the areas in which this strategy has paid off for the USA is in its appeal to foreign students, educating a full one-third of the 1.4 million international students, and this despite the fact that virtually all are required to pay tuition, a financial infusion into the system that is lost to German universities.

## **8. Conclusions**

Higher education in the Western world is diverse and dynamic in nature, catering to demands from society with regard to students, parents and the ultimate customers that offer employment opportunities to the graduates. Changes in Germany are slow in coming, due in part to the autonomy of the states in educational matters. Not making these changes, however, is costing the German system of higher education in international recognition, in quality of graduate students and in badly needed resources to strengthen the University system and its services. Needed is a regulated introduction of international degrees, coupled with a greater emphasis on marketing of these services, particularly overseas. A bundling of forces, especially in those fields where critical mass is difficult to attain, may help increase the quality of education and lead to economies of scale. The strengthening of ties should be based on an intensive selection process with a limited group of universities. The selection and

development process which is advocated here should be coupled with investments in those centers of excellence in the German university system in order to increase their appeal to trainees and scholars from abroad. In the field of tropical agriculture such alliances could be formed with neighboring countries (Netherlands, Belgium, France) or with Universities within Germany such as Berlin, Goettingen and Hohenheim, as was suggested by the „Wissenschaftsrat,“. However, with the restructuring of the Witzenhausen faculty, a close collaboration between Witzenhausen and Goettingen seems only a logical first step.

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