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The University within the research System – An international comparison

Science and society. Constitutional problems.
The national experiences



Nomos Verlagsgesellschaft
Baden-Baden

Academic Freedom in Jobs – An Initial Outline –

I. Introduction

Anyone dealing with academic freedom will in the Federal Republic think primarily of universities. In the general awareness, they are the locus of reflection on nature and society, of extension of existing knowledge. Those who carry out this task are in the first place the professors. They enjoy a high degree of personal independence, and may not be compelled by the State to adopt particular approaches or methods, still less arrive at particular findings. The results of their research are the object of scholarly discourse; suppressing them would be conduct that would meet with extreme disapproval.

The freedom of teaching and research is given an explicit guarantee in Article 5 (3) of the Basic Law. The German Federal legislator has brought teaching and research in universities and colleges under detailed regulation.¹ Fundamental importance attaches to the provisions of Article 3 of the Universities Organization Act (HRG), Clause 1 of which obliges each of the Länder and the institutions of higher education to create the conditions for members of universities and colleges to be able to exercise the rights guaranteed by Article 5 (3) of the Basic Law. As regards freedom of research, Clause 2 of the same Article states that it covers »in particular the approach, methodological principles and the evaluation of research findings and their dissemination«. Decisions by the competent bodies of universities and colleges are admissible insofar as they relate to organization of research effort, promotion and coordination of research projects and establishment of research priorities; the freedom of research mentioned initially may not be curtailed hereby. The Act also contains important provisions for the work situation of university teachers. Thus, para. 50 (1), third sentence, HRG implicitly exempts them from the obligation to be present in university during particular working

¹ The Universities Organization Act (HRG) of 26 January 1976, BGBl I, 185, last amended by Act of 14 November 1985, BGBl I, 2090.

hours; this does not however apply to university assistants and other subordinate academic workers.

The fact that research goes on in private firms receives scarcely any official attention, other than the dispute that flared up in the 1970s over the new foundation of private universities.² Chemists in employment, medical doctors in private research laboratories, physicists in aeronautics, are all academically active without the statutory provisions mentioned being applicable to them. Employers would presumably react rather negatively to a section head who put the view that it would be quite enough if he turned up at the firm for three or four hours a week. And any big chemical firm will regard it as important itself to determine the questions to which research is to relate. After all, are not employed scientists workers like any others?

Until the very recent past, this question has been answered more or less automatically in the affirmative. It is only in the last few years that conflicts have broken out: one employed scientist had criticized his employer's waste disposal plant in a professional journal;³ in another case, employed medical doctors had refused to collaborate in developing a medicament which could according to NATO defence plans also be employed in nuclear war.⁴ Cases of this type indicate that to date we have no »scientists' charter« in the private economy, indeed that it is still largely unclarified what effect Article 5 (3) of the Basic Law possesses in employment relationships (outside the universities).⁵ This is all the more regrettable since according to a recent study by the Federal Ministry for Research and Technology 70 % of all scientists are employed in industry.⁶ The reality is thus in contradiction with the traditional view: it is not the tenured university professor with his guarantee of independence that is the typical scientist, but the employed research worker. What problems result in

detail? It is not possible to give a full treatment below.⁷ Instead, three aspects of the issues can be clarified. Does academic freedom entail provisions on work organization; does it, in particular, limit the employer's right to give instructions? To what extent can the employment relationship of an employed scientist prevent him from publishing his findings from his work? To what extent, finally, does he have the right to refuse to collaborate on particular projects? Before attempting an answer, it would be well to start by verifying whether the academic freedom of Article 5 (3) of the Basic Law at all enters into the relationship with private employers; only then can serious consideration be given to the development of special rules.

II. Appeals to academic freedom within the employment relationship

By contrast with many other Western European legal systems, German labour law has *a priori* »incorporated« the basic rights of the Constitution.⁸ According to the original case law of the Federal Labour Tribunal, a worker could vis-à-vis the employer appeal directly to for instance the freedom of expression of Article 5 (1) of the Basic Law or to the free development of the personality in accordance with Article 2 (1), from which a right to actual employment throughout the period of the employment relationship was derived.⁹ Clauses in employment contracts whereby particular social benefits were to be repaid in the event of termination by the employee were objected to in the light of free choice of workplace, pursuant to Article 12 (1) of the Basic Law.¹⁰ And the so-called bachelor clause, making the employment relationship end automatically on marriage, was declared unlawful for contravention of the protection of marriage and family pursuant to Article 6 (1) of the Basic Law.¹¹

2 A summary of this is in Blankenagel, Wissenschaftsfreiheit aus der Sicht der Wissenschaftssoziologie: Zugleich ein Beitrag zum Problem der Privatuniversität, AöR 105 (1980), 35 ff.

3 See »Der Spiegel« vol. 11/1987, p. 50 f.

4 LAG Düsseldorf BB 1988, 1750. On this see Wendeling-Schröder, Gewissen und Eigenverantwortung im Arbeitsleben, BB 1988, 1742 ff.

5 Approaches can now be found in Wendeling-Schröder, Autonomie und Verantwortung von Industriewissenschaftler(inne)n, WSI-Mitt. 1988, 697 ff.

6 BMFT (ed.), Faktenbericht 1986, p. 15, 298: of 380,000 people working in research, 250,000 are in industry, the rest in universities and big research institutions. Figures for 1975 in Blankenagel, op. cit. p. 54: 53.9 % of scientists were employed in industry, 5.3 % in administration, 12.7 % in organizations with no commercial character and 28.4 % in universities. In the US the concentration was already much heavier in industrial research (73.5 %, as against 13.7 % for universities).

7 Accordingly, it need not be gone into in this context how the range of scientific workers is to be delimited in detail. Nor is it gone into whether the agreement in the labour contract provides for work »as a physicist«, »as a chemist« etc. Since the intention is not to eliminate grey areas, the question of whether and under what conditions for instance jurists, economists or sociologists are academically active outside universities will also be left out of account.

8 On the situation in Italy see e.g. Ghezzi-Romagnoli, Il rapporto di lavoro, 2nd. edition, Bologna 1987, no. 23 ff.; on the legal position in France Camerlynck/Lyon-Caen/Pélissier, droit du travail, 13th ed. Paris 1986, p. 411 ff.

9 BAG AP No. 2 on para. 611 BGB, duty of employment; a fundamental decision is BAG AP no. 2 on para. 13 KSchG and BAG AP no. 1 on Article 6 (1) of the Basic Law, marriage and family.

10 BAG AP no. 25 on Article 12 of the Basic Law.

11 BAG AP no. 1 on Article 6 (1) of the Basic Law, marriage and family.

In recent years the Federal Labour Tribunal has been steering a more cautious course. Fundamental rights are no longer applied directly to the employment relationship. It is instead only the general clauses of labour law and civil law, such as the duty of care and of loyalty, public morals etc., that are made specific in respect of value-decisions based on the fundamental rights.¹² In the upshot, to be sure, nothing is changed by this; the Grand Senate's decision that brought about the change¹³ affirmed an entitlement of the employee to actual employment in the same way as had the earlier case law. In the area of data-protection too, no reduction in rights has been practised.¹⁴

What does this mean for academic freedom? So far, no decision of the Federal Labour Tribunal can be seen as dealing with the scope of Article 5 (3) of the Basic Law in the employment relationship. The Regional Labour Tribunal of the Rhineland-Palatinate has, without more detailed specification, applied this provision too in the labour relationship.¹⁵ Here it has been able to base itself on the fact that the Federal Constitutional Court has termed Article 5 (3) of the Basic Law a fundamental right of any academic worker, without requiring a relationship to a university.¹⁶ The literature in general assigns academic freedom effect in the employment relationship too.¹⁷ In fact there are no bases available for treating this fundamental right differently from the other guarantees in the Constitution. This thesis is indirectly confirmed by the fact that para. 118 (1) Enterprise Constitution Act (BetrVG) tends to provide protection also in cases where the employing firm pursues primarily scientific goals: here the works council, as representative of all employees, cannot participate in deciding intrinsically scientific questions or in any other way influence their treatment.¹⁸ The principle as such, therefore, does not raise any special problems; the real difficulty lies in putting it into practice.

12 A fundamental decision is BAG AP no. 14 on para. 611 BGB, duty of employment.

13 See fn. 12.

14 On the »third party effect« of the right of informational self-determination and on further details of the Federal Labour Tribunal's case law, see Däubler, Gläserne Belegschaften? Datenschutz für Arbeiter, Angestellte und Beamte, Cologne 1987, Rn 87 ff.

15 Regional Labour Tribunal of Rhineland Palatinate, judgement of 21 December 1987, 9 Sa 251/87, reported in Wendeling-Schröder WSI-Mitt. 1988, 704 f.

16 BVerfGE 15, 256, 263; 35, 79, 114; 47, 327, 367.

17 Däubler, Das Arbeitsrecht 2, 4th ed., Reinbek 1986, p. 753; Starck, Meinungs- und Wissenschaftsfreiheit, Grundlagen und rechtsdogmatische Ausformungen, in: Festschrift Zeidler, Berlin/New York 1987, p. 1545; Wendeling-Schröder BB 1988, 1747; see also Galperin-Löwisch, BetrVG, 6th ed., Heidelberg 1982, para. 118 Rn. 20a. References to the validity of Article 5 (3) of the Basic Law »in private law« can be found in Blankenagel op. cit. (fn. 2 above) p. 36 fn. 5. For full application of Article 5 (3) to »object-oriented industrial research« see also Scholz, in: Maunz-Düring-Herzog-Scholz, Basic Law, Article 5 Rn. 98.

18 On this see e.g. Fitting-Auffarth-Kaiser-Heitherr, BetrVG, 15th ed., Munich 1987, para. 118 Rn 22.

III. Constitutional frameworks for organizing scientific work in employment?

1. Application in practice in the university sphere

The Federal Constitutional Court has drawn very specific consequences from Article 5 (3) of the Basic Law for the activity of the individual academic in the university sphere. The starting point is the correct finding that the Basic Law does not protect any particular view of science or any particular academic theory;¹⁹ even the judgement which in 1956 banned the Communist Party of Germany stated explicitly that Marxism as a theory had not been made illegal, but could continue to be pursued in universities.²⁰ The freedom of research of the individual scholar included »in particular the approach and principles of methodology, assessment of research findings and their dissemination«.²¹ Elsewhere mention is made of »the making of findings, their interpretation and transmission«.²² Action by scholars directed towards this forms part of the »inviolable core« of their work and is protected against any intervention by the State.²³ The »distance« of learning from State and society²⁴ entails that the State can neither prescribe particular objects of research nor for instance, stop the publication of results.

2. Specific points regarding research pursued in the private economy

Were one to transfer these statements derived directly from the Constitution unmodified to private research, it would be strongly hampered. An electronics firm that could not determine the research fields of its employed scientists is just as inconceivable as a chemicals firm that would have to look on helplessly while one of its employees »blabbered out« trade secrets in a professional journal, thus wiping out the competitive advantage over others. The basic right to academic freedom would under such circumstances be made into an absolute, at the expense of the activity of enterprise protected by Article 12 (1) of the Basic Law. According to the recent case law of the Federal Labour

19 BVerfGE 35, 79, 113.

20 BVerfGE 5, 85, 145 ff. See also Denninger, AK-GG, Neuwied und Darmstadt 1984, Article 5 (3) Rn 19.

21 BVerfGE 35, 79, 113.

22 BVerfGE 47, 327, 367.

23 BVerfGE 35, 79, 122.

24 BVerfGE 47, 327, 370.

Tribunal,²⁵ however, such a finding can *a priori* not even be considered. In the context of »indirect« third-party effect, all that can instead come into it is that the »value decision« expressed in Article 5 (3) of the Basic Law should also be extended to research pursued commercially, but while observing also the employer's sphere of protection in fundamental rights in accordance with the precept of compatibility in practice. What this means specifically calls for thorough consideration.

We may start by ruling out two extreme cases. One has already been mentioned: the complete autonomy due the university teacher as an individual according to the Federal Constitutional Court's view can hardly be allowed to the employed scientist. On the other hand, however, things ought not to remain merely at the general labour-law limits of employers' powers. Were the scientist too able to appeal only to non-contravention of industrial safety rules and to not being given any »unfair« instructions, Article 5 (3) of the Basic Law would be without meaning in the employment relationship.

The degree of autonomy that must be left even to the employed scientist cannot be determined solely by having regard to the fact that academic freedom is a fundamental right that protects particular individuals. What has instead to be taken account of is the fact that the organization of the scientific enterprise to a considerable extent affects general interests. It is only a free science, determining its objects, approaches and methods itself, that offers a realistic chance of increasing available knowledge on nature and society and thus being able to control the development of the conditions of life better. The pluralism of academic approaches is not only a piece of freedom, but a precondition for society's »self-reflectiveness«: the more we know about ourselves and our surroundings, the easier can rational solutions be found for problems facing us. Were, for instance, research projects limited from the outset to topics likely to bring the initiators profit, many questions would have to remain unasked. There would be lacunae not only in fundamental problems, but even many individual aspects would have to be decided on the basis of pre-scientific everyday knowledge. In the upshot, science oriented exclusively to profit would have no other effect than to replace pluralist theories and opinions in the university sphere by a position with claims to absolute truth. The Federal Constitutional Court, while it has not explicitly addressed this connection, has on various occasions stressed the interest of the generality in a »functioning enterprise of science«²⁶ and stated that science has a »key function for the development

of society as a whole«.²⁷ Similar considerations underlie the case law on broadcasting freedom. If radio and television are structured pluralistically and the public bodies have to be responsible for »basic provision«,²⁸ this is because this is the only way to attain a free communication process with no commanded blinkering of views, no restrictions on particular facts and values. And the guarantee of the right of informational self-determination is justified no differently: it is said to be an »elementary functional condition of a free democratic community founded on the capacity of its citizens to act and collaborate«.²⁹

The framework conditions that may be derived from this for the (quantitative) relationship between State-supported and private research is not our topic. It should therefore also be sufficient to refer to the justified thesis that it is no longer compatible with Article 5 (3) of the Basic Law for industrial research to offer »practically the only chance of doing research needing expensive apparatus«.³⁰ In the context that interests us here the point is instead, just as with private radio stations, primarily the guaranteeing of the largest possible extent of plurality in the private forms too. This is not ensured merely by a multiplicity of enterprises doing research, since competition forces them towards a specific approach. It is instead necessary also to expand the individual scientist's room for manoeuvre. To that extent, there is a certain parallel not only with private broadcasting but also with freedom of the press, where for all the »pre-programming« of the general line by the owner, some editorial responsibility must be retained.³¹

3. Specific consequences

The operator of a private research institution must constitutionally content himself with setting as few bounds as possible. If the field to be researched can be defined more abstractly or instead more specifically, the former should be attempted. It is then a matter for the scientists to make the further delimitation. It is they in any case who must decide on the methods to be applied, and likewise

25 References in fns. 12-14 above.

26 BVerfGE 35, 79, 115/6.

27 BVerfGE 47, 327, 368.

28 BVerfG EuGRZ 1986, 577, 586 ff.; there also can be found statements on the legislator's freedom of action and on lesser requirements on private transmitting stations insofar and for as long as the public institutions fulfil their functions.

29 BVerfGE 65, 1, 42 f.

30 Denninger, AK-GG, Article 5 (3) Rn 25.

31 On this see e.g. Hoffmann-Riem, AK-GG, Article 5 (1), 2 Rn 131 ff., 141. Cf. also Starck (fn. 17 above) p. 1545, who on Article 5 (3) distinguishes between »topics« (a power of the employer) and »modes of procedure« (a power of the employee).

the question when a finding has been reached, that is, when the process of discovery can be temporarily regarded as concluded, is essentially to be solved by them themselves. The same applies to evaluation of results: the scientist may not be degraded into a »hack« who has to publicize things not in accord with his personal convictions.

For all further questions of work organization, Article 5 (3) of the Basic Law can merely set the guidelines; no-one can seriously assert that only one very definite form of work organization is compatible with the Constitution. The legislator might set particular framework conditions, and the parties to collective bargaining would also be empowered for this. As long as neither has been done, in the event of conflict it is the labour tribunals that decide how the duties of employed scientists under their labour contract are to be made specific in the light of Article 5 (3) of the Basic Law. The fundamental right to academic freedom is of great importance again in the conclusion of plant bargains and in decisions of conciliation bodies: within the framework of the »free discretion« pursuant to para. 76 (5), third sentence, BetrVG, it is the form of specification that allows scientific workers the greatest room for manoeuvre without jeopardizing the firm's functionality that is in principle to be preferred. Let us now make a few suggestions regarding some problems of work organization.

As far as working times are concerned, the regulation of para. 50 (1), third sentence HRG mentioned at the outset makes it clear that academic work need not necessarily take place at particular pre-set places at particular pre-set times. The decisive thing is the results, not the hours spent in the chair. Accordingly, it is particularly appropriate for the requirements of the academic sphere for the workers themselves to decide the temporal spread of their work. The functionality of the firm is adequately taken into account if all scientists must be present simultaneously at particular times of the day or the week, thereby being available for coordination of their activities. Rigid regulations whereby thinking should start at 7.30 a.m. and be switched off at 4 p.m. seem inappropriate to the case: they might just be acceptable as an explicit agreement in an individual contract, but can hardly be a »fair« balance of interests as the content of a decision by a conciliation body.

A further very major problem concerns the extent of hierarchy that exists among the individual scientists. Should particular institute directors, after the fashion of a head of government, lay down guidelines that are merely to be followed by the others? For the university area, the Federal Constitutional Court has arrived at the statement that the Federal right of academic freedom is due not only to professors but also to other academic workers and those students

who are integrated into the research process.³² At the same time, though, it has found different types of bearers of fundamental rights: the professors, because of their previous training, their work over mostly a number of years, and their experience, put the main stamp on the university as an academic institution. They are the ones who carry out the key functions of academic life – accordingly, even only having regard to the principle of equality, it is appropriate to allow them the decisive role in, say, the composition of decision-making bodies. Whether a similar distinction can be drawn in the area of research done privately is something that cannot be answered unambiguously; but practice suggests that comparable forms of hierarchy are admissible there. To be sure, any conciliation body will also have to consider empirical studies according to which too much hierarchy makes the creativity of those involved and thus the efficiency of the scientific enterprise suffer.³³

Cooperative or hierarchical structures operate not only in the organization of work itself but frequently also in the allocation of findings of work. The danger that the »big researcher« may appear as the owner of academic findings that he has not himself arrived at is all too familiar. For the special cases of invention and works capable of copyright, statutory provisions exist. According to the Employees Inventors Act, or to para. 43 of the Copyright Act, the creator principle applies: the holder of the right will be whoever has actually done the work – whether an individual or a group. The employer may take the economic value; the intangible aspects, and in particular the right to be named as inventor or author, remain with the worker.³⁴ Nothing any different should apply to other academic work – according to the Federal Constitutional Court's case law described above³⁵ it is part of the inviolable core of academic freedom that the individual can *inter alia* also evaluate his findings, which necessarily presupposes that no-one can deny him the fruits of his labour. An employer interest that would oppose consistent application of the creator principle is not apparent. The fact that the legal guarantees do not provide the worker with absolute protection but that *de facto* dependencies, career interests, may take priority is, admittedly, the other side of the coin.

In one big research institute, the question of how a scientist's computerized work station was to be recently became controversial. The problem was on the one hand that some (a few) scientists refused to input text to the computer at all, wanting to stay with paper and typewriter. The more important question was how far the information system could offer guarantees regarding the possible

32 BVerfGE 35, 79, 125.

33 References in Blankenagel, op.cit., p. 67 fn. 159 and 160.

34 Para. 36 PatG, paras. 43 taken together with 13, 29 second sentence UrhRG.

35 Fn. 21 ff.

joint use (exploitation) by others of the thoughts and preliminary working results of individual scientists. On both questions a solution was found by way of negotiations between the works council and the management: no-one was to be compelled to use the computer; the information system was to be set up in such a way as to exclude abusive access within the limit of the possible. Both regulations were reached on the basis of »traditional« negotiations, not referring to Article 5 (3) of the Basic Law, but any other result would have been hard to term »fair«.

Finally, a recent Federal Labour Tribunal judgement should be mentioned, on the question of how far the likely duration of an academic project should coincide with the period of a time-limited work contract.³⁶ In the specific case the Federal Labour Tribunal decided that there was no »protection of the status quo because of academic freedom«, but that time limitation was only admissible where the planned work can be »substantially« advanced during the period of the employment relationship. This was to be affirmed in the case of a period of one year, but time limitations of two or three months would have no effect. This provides only an absolute minimum of protection; the value decision of Article 5 (3) would have been met much better by assuming that the length of the project and of the time limitation should coincide.³⁷

IV. *Unalienable right to publication of findings of work?*

One of the most burdensome problems for the employed scientist may be that the employer forbids publication of research findings – whether by appealing to an »obvious« duty of loyalty on the employee, or by providing for a duty to secure permission or even a total ban on publication in the employment contract. For the scientist concerned this has severe consequences, since in this way he is denied social recognition (and the concomitant chances of advancement), but also possibilities of the »feedback« that might help to bring his own processes of discovery forward. From the viewpoint of the general interest, »secret science« is yet more dangerous than an excess of one-sided approaches: control is no longer possible and responsibility for consequences has to be left to the few holders of the secret.

³⁶ BAG NZA 1988 392.

³⁷ Cf. also BAG NZA 1987, 741, 743, which suggests such a conclusion.

According to the statements of the Federal Constitutional Court cited above, the right to publish work findings belongs to the essence of academic freedom.³⁸ Accordingly, publication bans are questionable in the highest degree.³⁹ On the other hand, exceptions are conceivable in favour of objects of equally strong constitutional protection. Thus, there are in general no objections to the notion that findings of military research should remain unknown even to the professional public. Whether the interest of a private firm in keeping its trade secrets enjoys comparably high rank will have to be doubted. By contrast with the needs of defence, which are reflected in the Basic Law's provisions on the Federal Armed Forces, entrepreneurial freedom of action is subject to the law and may also therefore be circumscribed by considerable limitations. This means in particular that a publication ban is justified only where if particular facts became known the firm would be severely harmed in competition or in some other respects. It follows that great importance attaches to the time factor too – if a technical lead is no longer present after one or two years because other competitors have in the meantime found comparable solutions, then there is no longer any reason to deny an employed scientist publication of previous work. If a lasting publication ban has by contrast to persist, then appropriate application of para. 17 (3) of the Employee Inventor Act should come into consideration. This provides that the employee is to receive higher compensation than usual for an invention where the employer refrains from applying for a patent and the employee therefore continues to be bound to silence, pursuant to para. 24 (2) of the Employee Inventor Act. If important interests do have to be sacrificed, then there should at least be material compensation.

Apart from the cases of an entrepreneurial interest of overreaching importance, no right of the employer to hinder the publication of findings of work should be recognized. Clauses to this effect in labour contracts are ineffective as running counter to the value decision of Article 5 (3) of the Basic Law.⁴⁰ If a duty to seek permission is provided for, the procedure should be as with spare-time work: permission should always be given where there is no overwhelming interest on the employer's part.⁴¹ An interesting fact in this connection is that para. 6, second sentence, of the Hessian University Act of 1974 even provided

³⁸ See fn. 21 above (»dissemination«) and fn. 22 (»transmission«).

³⁹ On the »approach to the public« in the general interest, which will not be gone into further here, and on reference to freedom of opinion under Article 5 (1) of the Basic Law, see esp. Simitis, Die Verordnete Sprachlosigkeit: Das Arbeitsverhältnis als Kommunikationsbarriere, Festschrift Simon, Baden-Baden 1987, p. 329, 345 ff.

⁴⁰ Similarly Wendeling-Schröder WSI-Mitt. 1988, 704.

⁴¹ For the law on spare-time work see BAG AP No. 60 on para. 626 BGB = DB 1971, 581; DB 1977, 544.

for an obligation of university members involved in teaching and research to draw attention to dangers of scientific research. In detail, it was provided that:⁴²

«Should they (university members) come to know research findings, especially in their own discipline, which might if irresponsibly applied bring serious danger to the health, life or peaceful coexistence of people, they should inform the competent faculty board or a central body of the university accordingly.»

The Federal Constitutional Court has declared this provision to be in principle in conformity with the Constitution,⁴³ thus attaching such high importance to the publicity of the scientific process that it must in some cases even be brought about against the wishes of an individual researcher.

Publications by an employed scientist may be undesired by the employer also because criticisms of his conduct are made or it is stated that he does not take the state of the art sufficiently into account.⁴⁴ The case law requires in general that an employee should in all cases first of all seek to secure a remedy by talking with superiors, making complaints within the enterprise etc.⁴⁵ Only once this has proved fruitless is an approach to the public to be admissible. The Federal Court of Justice made this clear on the example of grievances in a press firm publicized by a writer disguised as a journalist: since representations within the firm were *a priori* hopeless, the public could immediately be informed.⁴⁶ The more heavily the public is affected, the less reticence can the individual be called on for; this applies, for instance, in environmental protection.⁴⁷

What is admissible on the ground of general freedom of opinion alone cannot be made dependent on complying with further conditions in the area of scientific work. The scientist too may therefore write about matters that may possibly be unpleasant for his employer. Consideration is to be expected to be shown only in not needlessly exposing the employer by mentioning him by name; as long as the same thing can be said without explicit or allusive reference to on-goings within the firm, this »anonymous« way is to be preferred. Things may be different where there is a public interest in information specifically in the conduct of a particular firm which, for instance, regularly breaks regulations to protect the environment, with tacit tolerance from the authorities.

42 Reproduced in BVerfGE 47, 327, 366.

43 BVerfGE 47, 327, 366 ff.

44 See the case described in Wendeling-Schröder, WSI-Mitt. 1988, 704.

45 A survey of the case law on Article 5 (1) can be found in Simitis, loc. cit., p.331 ff. and Däubler, Gewerkschaftsrechte im Betrieb, 5th ed., Neuwied und Darmstadt: 1987, Rn 567 ff.

46 BGH NJW 1981, 1089 ff.

47 Cf. Simitis, loc. cit., p. 345 ff.

V. Refusal of work from scientific conviction?

The most recent developments, in the Federal Republic as in the US, are a number of cases where employees have refused on conscientious grounds to do particular types of work. A wellknown case is that of a printer from Itzehoe who refused to work on printing literature that glorified war: when he was dismissed on this ground, he brought a suit before the Federal Labour Tribunal, which he won.⁴⁸ The Tribunal concentrated on the fact that the conflict of conscience was not foreseeable in advance; moreover, the employer had had the possibility of giving the worker other work and giving the task to a colleague who would not have raised any moral objections. Another case was about three employed medical doctors who refused to develop a medicament that could have been used in nuclear war too.⁴⁹ Of much broader dimensions was the declaration of 7000 American scientists that they did not want to be involved in SDI research.⁵⁰

What are the causes for conflicts of this nature suddenly arising, when in the past they were scarcely to be met with? Presumably it is of quite essential importance that greater awareness of risk is present in society than at earlier periods: the arguments of the peace movement, but also experience with great civil disasters like Chernobyl and Sandoz make dangers of radically new dimensions clear. The individual scientist's responsibility becomes continually greater in this way – and therefore, understandably, also the wish to avoid the unforeseeable consequences of dangerous technologies as far as possible. The »right to say no«, to oppose the plans of the public or private employer, is acquiring increasing importance.⁵¹

Does academic freedom provide the right to refuse to work on particular projects? For the area of university research, this follows indirectly from the fact that the individual worker there can determine the object and approaches to be taken. For research in the private economy, free choice of object is hardly conceivable. But there are no objections to applying the principles on freedom of conscience developed in the case law to this area too. Anyone who would in order to take part in a particular research project have to act against fundamental convictions must have the possibility of opting out without risking his job, as long as other employment is possible, as is usually the case in big research

48 BAG BB 1985, 1853.

49 LAG Düsseldorf BB 1988, 1750.

50 Reported in: Informationsdienst Wissenschaft und Frieden, No.2/1987 (5. Jahrgang), p. 30.

51 For more see Däubler, The right to say no, in: Swedish Professionals against nuclear arms (ed.), Disarmament – but how? Stockholm 1988, p. 103 ff. (Minutes of a meeting of September 1987).

institutions. It is conceivable here that for scientists the limit of the acceptable is reached earlier than for other employees. For instance, no-one should be able to make anyone do research for objectives he has previously criticized in his academic work. Anyone, for instance, who has as a researcher intensively questioned military technology and its civil benefits can hardly be used for developing a new precision weapon even if he is otherwise in no way a pacifist: no employer may require of an employed scientist an activity that would shake his credibility or at any rate severely hamper his participation in the scientific communication process. Where the borderlines are to be drawn here in detail cannot at present be seen: the academic legal debate has not yet started. It may perhaps be helpful that the UNESCO General Conference of November 1974 adopted a »Researchers' Charter«, allowing the right, in Point 14 (c), ultimately to withdraw from scientific projects on conscientious grounds.⁵² The so-called Uppsala Ethical Code, which came out in the early 1980s in a private context, realistically provides that the community of all scientists should help those who on grounds of conscience have not only refused a piece of work but also lost their jobs.⁵³ This is another aspect that ought to be thought about: scientists in industry are employees, and can be dismissed. Anyone in such a situation who takes a decision in favour of academic freedom and against falling into line deserves respect and support.

52 German UNESCO-Commission (ed.), *Empfehlungen zur Stellung der wissenschaftlichen Forscher*, verabschiedet von der 18. Generalkonferenz der UNESCO am 23. November 1974, Cologne 1976.

53 See also the report by Frank von Hippel about conferring a prize on scientists who have put their career at stake in the interest of scientific responsibility – *Blätter für deutsche internationale Politik* 1987, 159.